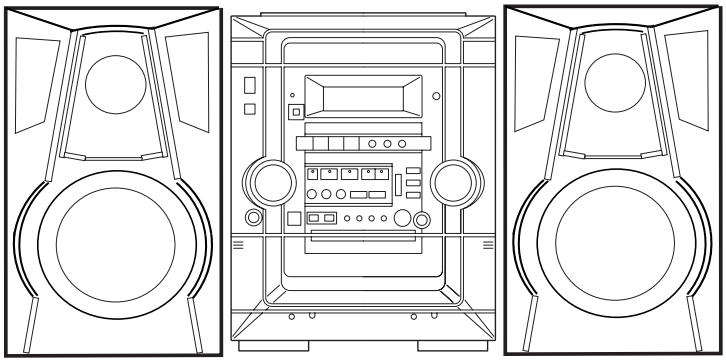
aiwa SERVICE

NSX-BL24 EZ, K
NSX-BL26 EZ
NSX-BL28 EZ, K



SERVICE MANUAL

COMPACT DISC STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-3 YPR1NC
BASIC CD MECHANISM : AZG-1 ZD8RDC

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX–BL24	CX–NBL24	SX–NBL25	RC–ZAS02
NSX–BL26	CX–NBL26	SX–NBL26	
NSX–BL28	CX–NBL28	SX–NBL28 <SUB WOOFER> SX–S20 <SATELLITE>	

• If requiring information about the CD mechanism, see Service Manual of AZG-1, (S/M Code No. 09-001-335-3NA).

aiwa

S/M Code No. 09-004-426-1R2

SPECIFICATIONS

Main unit CX-NBL24/26/28

<FM Tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	16.8 dBf
Antenna terminal	75 ohms (unbalanced)

<MW Tuner section>

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<LW Tuner section>

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

<Amplifier section>

Power output	Rated: 18 W + 18 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 20 W + 20 W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) DIN MUSIC POWER: 40 W + 40 W
Total harmonic distortion	0.08 % (12 W, 1 kHz, 6 ohms, DIN AUDIO)
Inputs	VIDEO/AUX: 500 mV
Outputs	SPEAKERS: accepts speakers of 6 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 15 kHz
Recording system	AC bias
Heads	DECK 1: Playback head x 1 DECK 2: Recording/playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser (λ =780 nm)
D/A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)

<General>

Power requirements	230 V AC, 50 Hz
Power consumption	80 W
Power consumption in standby mode	14 W with power-economizing mode off 0.9 W with power-economizing mode on
Dimensions (W x H x D)	260 x 328 x 329 mm
Weight	6.2 kg

Speaker system SX-NBL25 <NSX-BL24>
Speaker system SX-NBL26 <NSX-BL26>

Speaker system	3 way, bass reflex (magnetic shield type)
Speaker units	Woofer: 140 mm cone type Tweeter: 60 mm cone type Super tweeter: 20 mm ceramic type
Impedance	6 ohms
Sensitivity	87 dB/W/m
Dimensions (W x H x D)	202 x 324 x 219 mm
Weight	3.8 kg

Subwoofer SX-NBL28 <NSX-BL28>

Speaker system	Subwoofer system (magnetic shield type)
Speaker unit	200 mm cone type
Impedance	6 ohms
Sensitivity	87 dB/W/m
Dimensions (W x H x D)	250 x 324 x 293 mm
Weight	4.0 kg

Satellite speakers SX-S20 <NSX-BL28>

Speaker system	Full range (magnetic shield type)
Speaker unit	80 mm cone type
Impedance	6 ohms
Sensitivity	87 dB/W/m
Dimensions (W x H x D)	100 x 327 x 105 mm (with pedestal) 100 x 190 x 81 mm (without pedestal)
Weight	0.6 kg

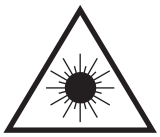
- Design and specifications are subject to change without notice.

- The word "BBE"and the "BBE symbol" are trademarks of BBE Sound, Inc.
  Under license from BBE Sound,Inc.

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserståling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saataa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herin may result in hazardous radiation exposure.

ATTENTION
L'utillisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL
Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

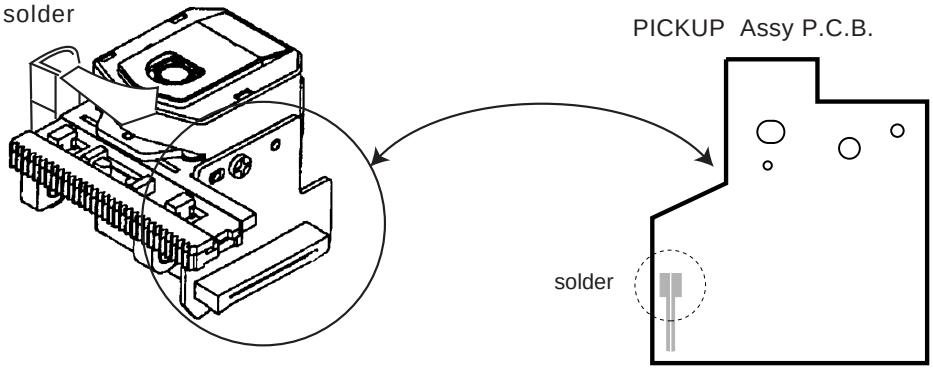
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block

(KSM – 880CAB)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in the right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.
In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

1 Remove the AC power cord.
2 Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
3 Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
4 Contact the same end of the discharging resistor as step **3** to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
5 Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

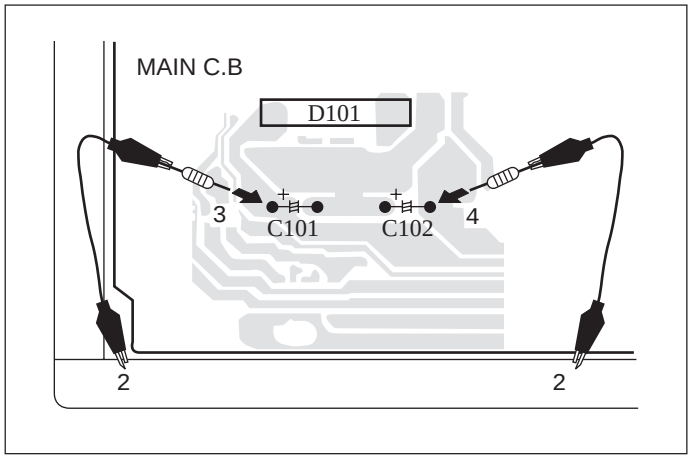


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is “H”, the MICROCOMPUTER is judged to be operating correctly. When this terminal is “L”, the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go “L” when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to “L”.

- Good or no good judgement of the MICROCOMPUTER

1 Turn on the AC main power.
2 Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the “H” level or not.
3 When the HOLD terminal is “L” level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

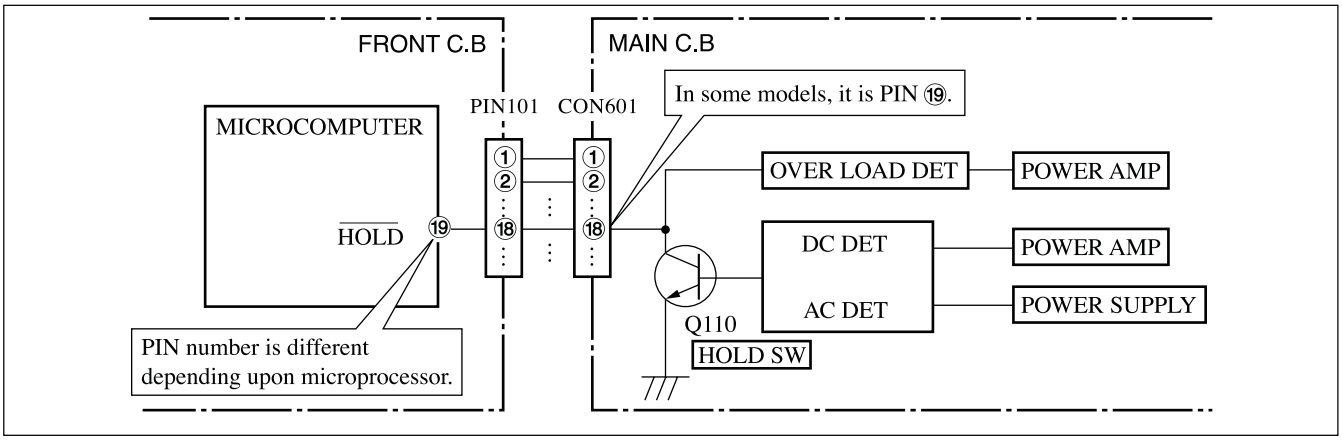


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.
When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

1 Remove the AC power cord.

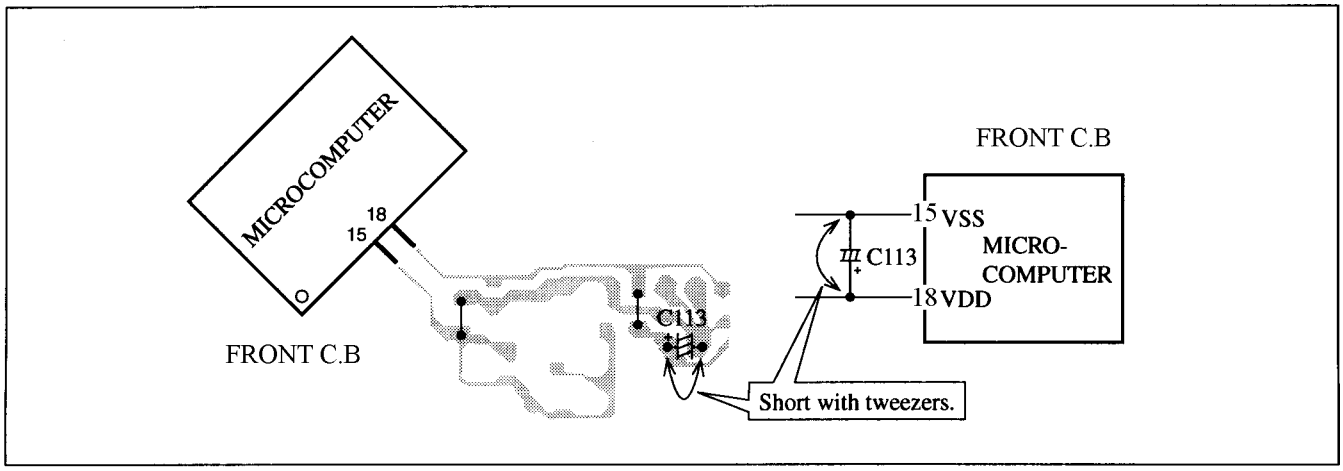


Fig-2-2

2 Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.

3 Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-269-010		IC,EW732
	87-A21-397-010		IC,STK490-070
	87-A21-419-040		C-IC,NJM14558MD-TE2
	87-A21-401-040		C-IC,M61503FP
	87-A21-415-010		IC,LA1843<EXCEPT 28K>
	87-A21-560-010		IC,LA1844L-A<28K>
	87-A20-440-040		C-IC,BU1920FS<26EZ>
	8A-NF9-601-110		C-IC,UPD780226GF-014-3BA<EXCEPT 26EZ>
	8A-NF9-602-110		C-IC,UPD780228GF-064-3BA<26EZ>
	87-A21-482-010		IC,RPM6938-H4
	87-070-127-110		IC,LC72131D
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	89-213-702-010		TR,2SB1370E
	87-026-610-080		TR,KTC3198GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-075-080		C-TR,2SA1235F
	87-A30-484-080		C-TR,KRA102S<EXCEPT 28K>
	87-A30-074-080		C-TR,RT1P141C
	87-A30-468-080		C-TR,KRC102S-RTK
	87-A30-107-070		C-TR,CMBT5401
	87-A30-106-040		C-TR,CMBT5551
	87-026-235-080		C-TR,DTC114EK
	87-A30-087-080		C-FET,2SK2158
	87-A30-091-080		FET,2SJ460
	87-A30-090-080		FET,2SK2541
	87-A30-062-080		C-TR,KRC104S
	87-A30-318-080		TR,CSA952K
	89-333-317-880		TR,2SC3331(T/U)
	87-A30-329-080		TR,CD1585BC
	89-327-143-080		C-TR,2SC2714O
	87-A30-072-080		C-TR,RT1P144C
	87-A30-086-040		C-TR,CSD1306E
	89-503-602-080		C-FET,2SK360E
	87-A30-234-080		TR,CSC4115BC
DIODE			
	87-A40-736-080		DIODE,1N4148M(SEM)<EXCEPT 28K>
	87-A40-553-080		DIODE,1N4003 LES
	87-A40-776-080		ZENER,UZ27BSD
	87-020-465-080		DIODE,1SS133<28K>
	87-A40-764-080		ZENER,UZ10BSC
	87-A40-313-080		C-DIODE,MC2840
	87-A40-270-080		C-DIODE,MC2838
	87-A40-269-080		C-DIODE,MC2836
	87-A40-854-080		ZENER,UZ15BSA
	87-A40-752-080		ZENER,UZ6.2BSC
	87-A40-739-080		ZENER,UZ2.7BSA
	87-017-149-080		ZENER,HZS6A2L
MAIN C.B			
C3	87-012-368-080		C-CAP,S 0.1-50 F
C4	87-012-368-080		C-CAP,S 0.1-50 F
C5	87-012-368-080		C-CAP,S 0.1-50 F
C6	87-012-368-080		C-CAP,S 0.1-50 F
C9	87-012-368-080		C-CAP,S 0.1-50 F
C10	87-012-368-080		C-CAP,S 0.1-50 F
C11	87-012-368-080		C-CAP,S 0.1-50 F
C12	87-012-368-080		C-CAP,S 0.1-50 F
C19	87-A12-193-090		CAP,E 2200-50 M 85 SAMXON<28K>
C19	87-A10-627-000		CAP,E 2200-50 M SMG<EXCEPT 28K>
C20	87-A12-193-090		CAP,E 2200-50 M 85 SAMXON<28K>
C20	87-A10-627-000		CAP,E 2200-50 M SMG<EXCEPT 28K>
C21	87-A12-182-090		CAP,E 3300-35 M 85 SAMXON<28K>
C21	87-A10-520-000		CAP,E 3300-35 M SMG<EXCEPT 28K>
C22	87-A12-182-090		CAP,E 3300-35 M 85 SAMXON<28K>
C22	87-A10-520-000		CAP,E 3300-35 M SMG<EXCEPT 28K>
C25	87-010-385-080		CAP,ELECT 220-25V
C26	87-010-247-080		CAP,ELECT 100-50V
C30	87-010-430-080		CAP,ELECT 100-63
C31	87-010-263-080		CAP,ELECT 100-10V
C32	87-010-197-080		CAP,CHIP 0.01 DM
C34	87-010-247-080		CAP,ELECT 100-50V
C35	87-010-380-080		CAP,ELECT 47-16V
C36	87-010-381-080		CAP,ELECT 330-16V
C38	87-010-197-080		CAP,CHIP 0.01 DM
C60	87-010-403-080		CAP,ELECT 3.3-50V
C61	87-010-260-080		CAP,ELECT 47-25V
C97	87-010-196-080		CHIP CAPACITOR,0.1-25
C99	87-010-196-080		CHIP CAPACITOR,0.1-25
C101	87-010-185-080		C-CAP,S 3900P-50 B
C102	87-010-185-080		C-CAP,S 3900P-50 B
C103	87-010-545-080		CAP,ELECT 0.22-50V
C104	87-010-545-080		CAP,ELECT 0.22-50V
C105	87-010-187-080		CAP,CHIP S5600P
C106	87-010-187-080		CAP,CHIP S5600P
C107	87-010-404-080		CAP,ELECT 4.7-50V
C108	87-010-404-080		CAP,ELECT 4.7-50V
C109	87-010-322-080		C-CAP,S 100P-50 CH
C110	87-010-322-080		C-CAP,S 100P-50 CH
C111	87-010-391-080		CAP,E 10-35 SME
C112	87-010-391-080		CAP,E 10-35 SME
C113	87-010-405-080		CAP,ELECT 10-50V
C114	87-010-405-080		CAP,ELECT 10-50V
C119	87-010-197-080		CAP,CHIP 0.01 DM
C120	87-010-197-080		CAP,CHIP 0.01 DM
C123	87-010-176-080		C-CAP,S 680P-50 SL
C124	87-010-176-080		C-CAP,S 680P-50 SL
C125	87-012-368-080		C-CAP,S 0.1-50 F
C126	87-012-368-080		C-CAP,S 0.1-50 F
C127	87-012-368-080		C-CAP,S 0.1-50 F
C128	87-012-368-080		C-CAP,S 0.1-50 F
C129	87-010-191-080		C-CAP,S 0.015-50 F
C130	87-010-191-080		C-CAP,S 0.015-50 F
C131	87-010-197-080		CAP,CHIP 0.01 DM
C132	87-010-197-080		CAP,CHIP 0.01 DM
C133	87-010-186-080		CAP,CHIP 4700P
C140	87-010-182-080		C-CAP,S 2200P-50 B
C141	87-010-196-080		CHIP CAPACITOR,0.1-25
C239	87-010-196-080		CHIP CAPACITOR,0.1-25
C301	87-010-178-080		CHIP CAP,1000P
C302	87-010-178-080		CHIP CAP,1000P
C303	87-010-178-080		CHIP CAP,1000P
C304	87-010-178-080		CHIP CAP,1000P
C307	87-010-263-080		CAP,ELECT 100-10V
C308	87-010-263-080		CAP,ELECT 100-10V
C309	87-010-318-080		C-CAP,S 47P-50 CH
C310	87-010-318-080		C-CAP,S 47P-50 CH
C313	87-010-188-080		CAP,CHIP 6800P
C314	87-010-188-080		CAP,CHIP 6800P
C315	87-010-263-080		CAP,ELECT 100-10V
C317	87-010-546-080		CAP,ELECT 0.33-50V
C318	87-010-546-080		CAP,ELECT 0.33-50V
C326	87-010-198-080		CAP,CHIP 0.022
C327	87-012-368-080		C-CAP,S 0.1-50 F
C360	87-010-401-080		CAP,ELECT 1-50V
C399	87-012-140-080		CAP,470P
C401	87-010-544-080		CAP,ELECT 0.1-50V
C402	87-010-544-080		CAP,ELECT 0.1-50V
C403	87-010-321-080		CHIP CAPACITOR,82P(J)
C404	87-010-321-080		CHIP CAPACITOR,82P(J)
C405	87-010-197-080		CAP,CHIP 0.01 DM
C406	87-010-197-080		CAP,CHIP 0.01 DM
C407	87-010-197-080		CAP,CHIP 0.01 DM

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C408	87-010-197-080		CAP,CHIP 0.01 DM
C409	87-010-182-080		C-CAP,S 2200P-50 B
C410	87-010-182-080		C-CAP,S 2200P-50 B
C411	87-010-405-080		CAP,ELECT 10-50V
C412	87-010-405-080		CAP,ELECT 10-50V
C452	87-010-382-080		CAP,ELECT 22-25V
C453	87-010-183-080		C-CAP,S 2700P-50 B
C454	87-010-183-080		C-CAP,S 2700P-50 B
C455	87-010-183-080		C-CAP,S 2700P-50 B
C456	87-010-197-080		CAP,CHIP 0.01 DM
C458	87-010-178-080		CHIP CAP,1000P
C459	87-010-175-080		CAP,560P
C460	87-010-196-080		CHIP CAPACITOR,0.1-25
C461	87-012-158-080		C-CAP,S 390P-50 CH
C462	87-012-158-080		C-CAP,S 390P-50 CH
C605	87-010-179-080		CAP,CHIP S B1200P
C606	87-010-179-080		CAP,CHIP S B1200P
C609	87-010-213-080		C-CAP,S 0.015-50 B
C610	87-010-213-080		C-CAP,S 0.015-50 B
C611	87-010-545-080		CAP,ELECT 0.22-50V
C612	87-010-545-080		CAP,ELECT 0.22-50V
C613	87-010-545-080		CAP,ELECT 0.22-50V
C614	87-010-545-080		CAP,ELECT 0.22-50V
C615	87-010-154-080		CAP,CHIP 10P
C616	87-010-221-080		CAP,ELECT 470-10V
C617	87-010-221-080		CAP,ELECT 470-10V
C618	87-010-405-080		CAP,ELECT 10-50V
C630	87-016-669-080		C-CAP,S 0.1-25 K B
C631	87-010-185-080		C-CAP,S 3900P-50 B
C632	87-010-185-080		C-CAP,S 3900P-50 B
C633	87-016-369-080		C-CAP,S 0.033-25 B K
C634	87-016-369-080		C-CAP,S 0.033-25 B K
C669	87-010-322-080		C-CAP,S 100P-50 CH
C670	87-010-322-080		C-CAP,S 100P-50 CH
C677	87-010-197-080		CAP,CHIP 0.01 DM
C771	87-010-263-080		CAP,ELECT 100-10V
C772	87-010-197-080		CAP,CHIP 0.01 DM
C779	87-010-971-080		C-CAP,S 4700P-50 B J
C780	87-010-971-080		C-CAP,S 4700P-50 B J
C782	87-010-197-080		CAP,CHIP 0.01 DM
C783	87-010-197-080		CAP,CHIP 0.01 DM
C784	87-010-197-080		CAP,CHIP 0.01 DM
C785	87-010-197-080		CAP,CHIP 0.01 DM
C786	87-010-197-080		CAP,CHIP 0.01 DM
C788	87-010-149-080		C-CAP,S 5P-50 CH
C789	87-A10-801-080		C-CAP,S 0.022-16 JB CM<28K>
C789	87-A11-532-080		C-CAP,S 0.022-50 J B<EXCEPT 28K>
C790	87-A10-801-080		C-CAP,S 0.022-16 JB CM<28K>
C790	87-A11-532-080		C-CAP,S 0.022-50 J B<EXCEPT 28K>
C791	87-010-196-080		CHIP CAPACITOR,0.1-25
C792	87-010-197-080		CAP,CHIP 0.01 DM
C793	87-010-404-080		CAP,ELECT 4.7-50V
C795	87-010-197-080		CAP,CHIP 0.01 DM
C796	87-010-197-080		CAP,CHIP 0.01 DM
C797	87-010-405-080		CAP,ELECT 10-50V
C798	87-010-197-080		CAP,CHIP 0.01 DM
C799	87-010-407-080		CAP,ELECT 33-50V
C800	87-012-369-080		C-CAP,S 0.047-50F
C801	87-010-403-080		CAP,ELECT 3.3-50V
C802	87-010-194-080		CAP,CHIP 0.047
C803	87-010-198-080		CAP,CHIP 0.022
C804	87-010-263-080		CAP,ELECT 100-10V
C807	87-010-400-080		CAP,ELECT 0.47-50V
C808	87-010-401-080		CAP,ELECT 1-50V
C809	87-010-401-080		CAP,ELECT 1-50V
C810	87-010-196-080		CHIP CAPACITOR,0.1-25
C814	87-010-197-080		CAP,CHIP 0.01 DM
C815	87-010-400-080		CAP,ELECT 0.47-50V
C816	87-010-400-080		CAP,ELECT 0.47-50V
C818	87-010-180-080		C-CAP,CER 1500P
C821	87-010-405-080		CAP,ELECT 10-50V
C823	87-012-349-080		C-CAP,S 1000P-50 CH
C824	87-010-405-080		CAP,ELECT 10-50V
C825	87-010-596-080		CAP,S 0.047-16
C831	87-010-406-080		CAP,ELECT 22-50
C842	87-010-197-080		CAP,CHIP 0.01 DM
C844	87-010-197-080		CAP,CHIP 0.01 DM
C850	87-010-260-080		CAP,ELECT 47-25V
C851	87-010-197-080		CAP,CHIP 0.01 DM
C852	87-010-197-080		CAP,CHIP 0.01 DM
C853	87-010-197-080		CAP,CHIP 0.01 DM
C858	87-010-196-080		CHIP CAPACITOR,0.1-25
C859	87-010-196-080		CHIP CAPACITOR,0.1-25
C860	87-010-197-080		CAP,CHIP 0.01 DM
C869	87-010-197-080		CAP,CHIP 0.01 DM<26EZ>
C871	87-012-156-080		C-CAP,S 220P-50 CH<26EZ>
C872	87-012-156-080		C-CAP,S 220P-50 CH<26EZ>
C873	87-012-140-080		CAP,470P<26EZ>
C874	87-010-405-080		CAP,ELECT 10-50V<26EZ>
C875	87-010-196-080		CHIP CAPACITOR,0.1-25<26EZ>
C876	87-010-405-080		CAP,ELECT 10-50V<26EZ>
C877	87-010-197-080		CAP,CHIP 0.01 DM<26EZ>
C878	87-010-316-080		C-CAP,S 33P-50 CH<26EZ>
C879	87-010-314-080		C-CAP,S 22P-50V<26EZ>
C940	87-010-197-080		CAP,CHIP 0.01 DM
C942	87-010-149-080		C-CAP,S 5P-50 CH
C947	87-010-197-080		CAP,CHIP 0.01 DM
C948	87-012-140-080		CAP,470P
C952	87-010-197-080		CAP,CHIP 0.01 DM
C957	87-010-311-080		CAP,12P
C958	87-010-197-080		CAP,CHIP 0.01 DM
C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C962	87-010-401-080		CAP,ELECT 1-50V
C963	87-015-785-080		CHIP CAPACITOR,0.1FZ-25Z
C971	87-010-381-080		CAP,ELECT 330-16V
C972	87-010-404-080		CAP,ELECT 4.7-50V
C973	87-010-197-080		CAP,CHIP 0.01 DM
C974	87-010-197-080		CAP,CHIP 0.01 DM
C979	87-010-322-080		C-CAP,S 100P-50 CH
C981	87-010-260-080		CAP,ELECT 47-25V
C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C983	87-010-197-080		CAP,CHIP 0.01 DM
C984	87-010-197-080		CAP,CHIP 0.01 DM
C985	87-010-322-080		C-CAP,S 100P-50 CH
C987	87-010-197-080		CAP,CHIP 0.01 DM
C989	87-010-197-080		CAP,CHIP 0.01 DM
C991	87-010-312-080		C-CAP,S 15P-50 CH
C992	87-010-312-080		C-CAP,S 15P-50 CH
C993	87-010-178-080		CHIP CAP,1000P
C995	87-010-178-080		CHIP CAP,1000P
C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C998	87-010-260-080		CAP,ELECT 47-25V
C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
CF831	87-008-423-010		FLTR,CF SFE10.7MS3G-A
CF832	82-785-747-010		CF,MS2 GHY,R
CN301	87-A60-620-010		CONN,3P V 2MM JMT
CN351	87-A60-625-010		CONN,8P V 2MM JMT
CN601	87-099-719-010		CONN,30P TYK-B(X)
CN602	87-A60-131-010		CONN,6P V FE
FB303	87-008-474-080		F-BEAD,EMI BL02RN1
FFC602	88-906-251-110		FF-CABLE,6P 1.25
FFE831	A8-6ZA-19C-170		6ZA-1 YFEENC
J202	87-A60-488-010		JACK,DIA6.3 BLK ST W/SW KM16AT
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
J832	87-A60-403-010		TERMINAL,ANT PAL 2P HSP-312V05
L101	87-A50-610-010		COIL,1UH K(MDEC)
L102	87-A50-610-010		COIL,1UH K(MDEC)
L451	87-007-342-010		COIL,OSC 85K BIAS

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
L801	87-A50-540-010		COIL,FM DET(TOK)<EXCEPT 28K>
L801	87-A50-608-010		COIL,FM DET-N(TOK)<28K>
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
L811	87-005-847-080		COIL,2.2UH(CECS)
L832	87-005-847-080		COIL,2.2UH(CECS)
L861	87-005-847-080		COIL,2.2UH(CECS)<26EZ>
L941	87-A50-020-010		COIL,ANT LW(COI)252KHZ
L942	87-A50-019-010		COIL,OSC LW(COI)856KHZ
L951	8A-NF8-668-010		COIL,AM PACK 2(TOK)
R131	87-A00-258-080		RES,M/F 0.22-1W J
R132	87-A00-258-080		RES,M/F 0.22-1W J
R143	87-A00-440-050		RES,220-1/2W J RP
R144	87-A00-440-050		RES,220-1/2W J RP
R145	87-A00-440-050		RES,220-1/2W J RP
R146	87-A00-440-050		RES,220-1/2W J RP
R653	87-A11-144-080		CAP,TC U 0.1-50 K B
R654	87-A11-144-080		CAP,TC U 0.1-50 K B
R790	87-010-197-080		CAP,CHIP 0.01 DM
R991	87-010-322-080		C-CAP,S 100P-50 CH
R993	87-010-322-080		C-CAP,S 100P-50 CH
R995	87-010-322-080		C-CAP,S 100P-50 CH
SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA
SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA
TC942	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECRLA
W99	8A-NF9-609-010		F-CABLE,9P 2.5 480MM
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P
X861	87-A70-091-010		VIB,XTAL 4.332MHZ CSA-309<26EZ>
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309

FRONT C.B

C101	87-010-196-080		CHIP CAPACITOR,0.1-25
C102	87-010-196-080		CHIP CAPACITOR,0.1-25
C103	87-010-498-040		CAP,E 10-16 GAS
C104	87-010-196-080		CHIP CAPACITOR,0.1-25
C107	87-010-493-040		CAP,E 0.47-50 GAS
C108	87-012-393-080		C-CAP,S 0.22-16 R K
C153	87-010-198-080		CAP,CHIP 0.022
C154	87-010-246-040		CAP,E 47-35 SME
C155	87-010-404-040		CAP,E 4.7-50 SME
C156	87-010-404-040		CAP,E 4.7-50 SME
C361	87-010-178-080		CHIP CAP,1000P
C362	87-010-178-080		CHIP CAP,1000P
C371	87-010-178-080		CHIP CAP,1000P
C372	87-010-178-080		CHIP CAP,1000P
C601	87-010-382-040		CAP,E 22-25 SME
C801	87-010-195-080		C-CAP,S 0.068-25 F
C802	87-010-195-080		C-CAP,S 0.068-25 F
C803	87-010-402-040		CAP,E 2.2-50 SME
C804	87-010-402-040		CAP,E 2.2-50 SME
C805	87-010-196-080		CHIP CAPACITOR,0.1-25
C806	87-010-196-080		CHIP CAPACITOR,0.1-25
C901	87-010-322-080		C-CAP,S 100P-50 CH
C902	87-010-322-080		C-CAP,S 100P-50 CH
C903	87-010-322-080		C-CAP,S 100P-50 CH
C904	87-010-322-080		C-CAP,S 100P-50 CH
C905	87-010-322-080		C-CAP,S 100P-50 CH
C906	87-010-322-080		C-CAP,S 100P-50 CH
C907	87-010-322-080		C-CAP,S 100P-50 CH
C908	87-010-322-080		C-CAP,S 100P-50 CH
C909	87-010-322-080		C-CAP,S 100P-50 CH
C910	87-010-322-080		C-CAP,S 100P-50 CH
C911	87-010-178-080		CHIP CAP,1000P
C912	87-010-196-080		CHIP CAPACITOR,0.1-25
C913	87-010-248-040		CAP,E 220-10 SME
C914	87-010-248-040		CAP,E 220-10 SME
C915	87-010-196-080		CHIP CAPACITOR,0.1-25
C916	87-010-196-080		CHIP CAPACITOR,0.1-25
C917	87-010-196-080		CHIP CAPACITOR,0.1-25
C919	87-010-197-080		CAP,CHIP 0.01 DM
C920	87-012-369-080		C-CAP,S 0.047-50F
C921	87-010-186-080		CAP,CHIP 4700P
C951	87-010-312-080		C-CAP,S 15P-50 CH
C952	87-012-155-080		C-CAP,180P-50CH
C953	87-012-140-080		CAP,470P
C961	87-010-378-040		CAP,E 10-16
C962	87-012-157-080		C-CAP,S 330P-50 CH
C963	87-010-196-080		CHIP CAPACITOR,0.1-25
CN104	87-A60-057-010		CONN,11P V 9604S-11C
CN701	87-099-720-010		CONN,30P TYK-B(P)
CN731	87-099-015-010		CONN,13P 6216V
FFC104	88-911-101-110		FF-CABLE,11P 1.25
FFC731	88-913-301-110		FF-CABLE,13P 1.25
FL901	8A-NF9-605-010		FL,HNA-10SS12
L951	87-A50-434-010		COIL,CLK 4.19M(TOKO)
LED201	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED202	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED204	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED205	87-A40-619-040		LED,SLR-56PT-T31-W GRN
LED209	87-A40-317-080		LED,SLR-342VCT31 RED
LED210	87-A40-619-040		LED,SLR-56PT-T31-W GRN
S301	87-A90-164-080		SW,TACT SKQNAB(N)
S302	87-A90-164-080		SW,TACT SKQNAB(N)
S303	87-A90-164-080		SW,TACT SKQNAB(N)
S304	87-A90-164-080		SW,TACT SKQNAB(N)
S305	87-A90-164-080		SW,TACT SKQNAB(N)
S306	87-A90-164-080		SW,TACT SKQNAB(N)
S307	87-A90-164-080		SW,TACT SKQNAB(N)
S308	87-A90-164-080		SW,TACT SKQNAB(N)
S309	87-A90-164-080		SW,TACT SKQNAB(N)
S321	87-A90-164-080		SW,TACT SKQNAB(N)
S322	87-A90-164-080		SW,TACT SKQNAB(N)
S323	87-A90-164-080		SW,TACT SKQNAB(N)
S324	87-A90-164-080		SW,TACT SKQNAB(N)
S325	87-A90-164-080		SW,TACT SKQNAB(N)
S326	87-A90-164-080		SW,TACT SKQNAB(N)
S327	87-A90-164-080		SW,TACT SKQNAB(N)<26EZ>
S328	87-A90-164-080		SW,TACT SKQNAB(N)<26EZ>
S329	87-A90-164-080		SW,TACT SKQNAB(N)<26EZ>
S341	87-A90-164-080		SW,TACT SKQNAB(N)
S342	87-A90-164-080		SW,TACT SKQNAB(N)
S343	87-A90-164-080		SW,TACT SKQNAB(N)
S344	87-A90-164-080		SW,TACT SKQNAB(N)
S345	87-A90-164-080		SW,TACT SKQNAB(N)
S346	87-A90-164-080		SW,TACT SKQNAB(N)
S347	87-A90-164-080		SW,TACT SKQNAB(N)
S348	87-A90-164-080		SW,TACT SKQNAB(N)
S349	87-A90-164-080		SW,TACT SKQNAB(N)
S350	87-A90-164-080		SW,TACT SKQNAB(N)
S361	87-A91-633-010		SW,RTRY XRE012103PVB25FINA 1-2
S371	87-A91-632-010		SW,RTRY XRE012103PVB25FINB 1-2

PT C.B

C183	87-010-387-080		CAP,E 470-25 SME
C184	87-010-403-080		CAP,ELECT 3.3-50V
C185	87-A11-148-080		CAP,TC U 0.1-50 Z F
⚠ PT1	8A-NF9-617-010		PT,ANF-9 EZ
⚠ PT181	8A-NF8-662-010		PT,SUB ANF-8(E)
⚠ RY181	87-A91-418-010		RELAY,AC12V G5PA-1-M
⚠ T181	87-A60-317-010		TERMINAL,1P MSC
⚠ T182	87-A60-317-010		TERMINAL,1P MSC
WH181	87-A90-510-010		HLDR,WIRE 2.5-9P

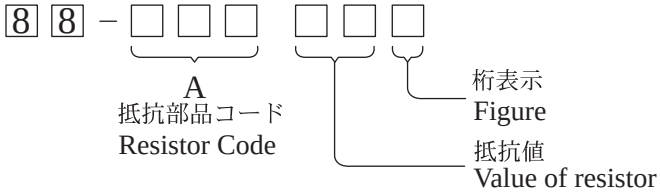
DECK C.B

CN1	87-099-753-010		CONN,11P H 9604
SFR1	87-024-581-010		SFR,3.3K H KVSF637A
SOL1	82-ZM3-627-010		SOL ASSY,27 S0
SOL2	82-ZM3-627-010		SOL ASSY,27 S0

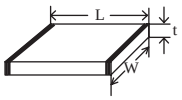
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
SW1	87-A90-673-010		SW,MICRO ESE11SH1C
SW2	87-A91-500-010		SW,MICRO MPU11470MLB0
SW3	87-A91-500-010		SW,MICRO MPU11470MLB0
SW4	87-A91-500-010		SW,MICRO MPU11470MLB0
SW5	87-A90-673-010		SW,MICRO ESE11SH1C
W1	82-ZM3-601-010		RBN-CORD,4P-75

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm)				抵抗コード　：A Resistor Code：A
				外形／Form	L	W	t	
1/16W	1005	±5%	CJ		1.0	0.5	0.35	104
1/16W	1608	±5%	CJ		1.6	0.8	0.45	108
1/10W	2125	±5%	CJ		2	1.25	0.45	118
1/8W	3216	±5%	CJ		3.2	1.6	0.55	128

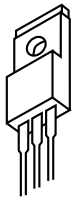
TRANSISTOR ILLUSTRATION

E C B

CD1585
CSA952
CSC4115
KTA1266
KTC3198

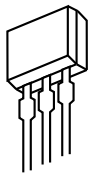
E C B

2SC3331



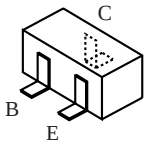
B C E

2SB1370

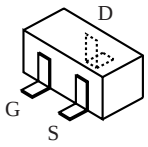


S D G

2SJ460
2SK2541



2SA1235
2SC2714
2SC3052
CMBT5401
CMBT5551
CSD1306
DTC114EK
KRA102S
KRC102S
KRC104S
RT1P141C
RT1P144C



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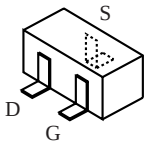
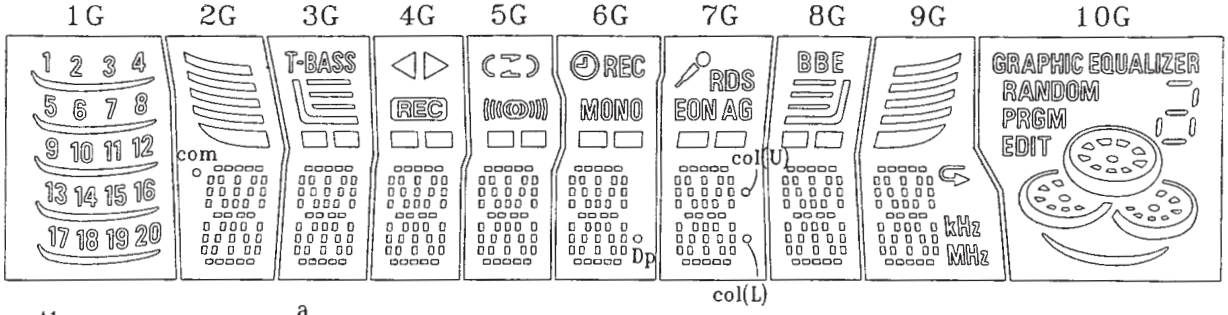
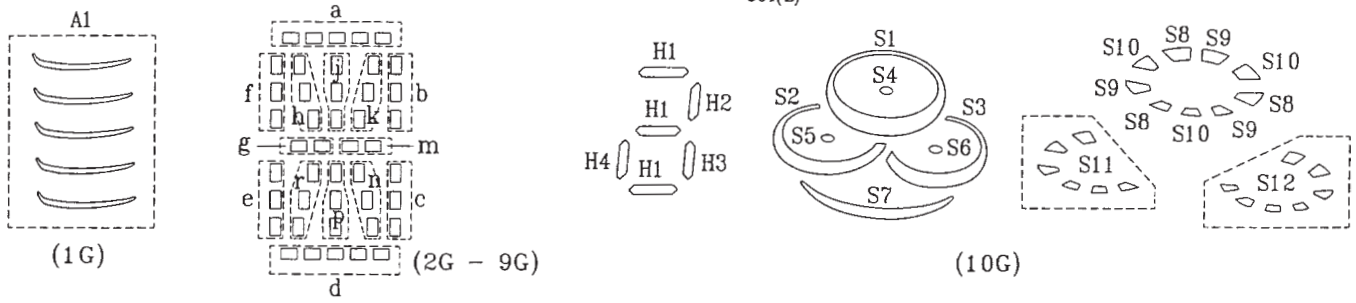


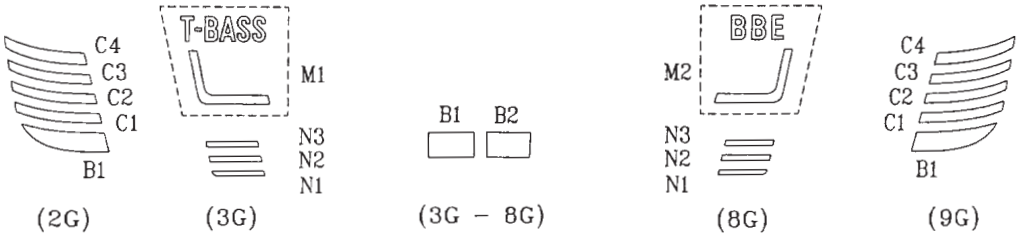
2SK360

FL (HNA–10SS12) GRID ASSIGNMENT / ANODE CONNECTION / PIN CONNECTION

GRID ASSIGNMENT







ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	20	d	d	d	d	d	d	d	d	S1
P2	19	n	n	n	n	n	n	n	n	S2
P3	18	p	p	p	p	p	p	p	p	S3
P4	17	r	r	r	r	r	r	r	r	S4
P5	16	e	e	e	e	e	e	e	e	S5
P6	15	c	c	c	c	c	c	c	c	S6
P7	14	g	g	g	g	g	g	g	g	S7
P8	13	m	m	m	m	m	m	m	m	S8
P9	12	f	f	f	f	f	f	f	f	S9
P10	11	b	b	b	b	b	b	b	b	S10
P11	10	k	k	k	k	k	k	k	k	S11
P12	9	j	j	j	j	j	j	j	j	S12
P13	8	h	h	h	h	h	h	h	h	EDIT
P14	7	a	a	a	a	a	a	a	a	PRGM
P15	6	B1	B1	B1	B1	B1	B1	B1	B1	RANDOM
P16	5	C1	B2	B2	B2	B2	B2	B2	C1	GRAPHIC EQUALIZER
P17	4	C2	M1	REC		Dp	col(U)	M2	C2	H1
P18	3	C3	N1	◁		MONO	col(L)	N1	C3	H2
P19	2	C4	N2	▷		REC	EON	N2	C4	H3
P20	1	com	N3				AG	N3		H4
P21	A1						RDS		kHz	
P22									MHz	

PIN CONNECTION

PIN NO.	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11
CONNECTION	F2	F2	NP	NP	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	P18	P19	P20	P21	P22	NC	NC	NC	NC	NC	1G	2G	3G	4G

◉ Notes ◉

1) Fn : Filament pin
2) nG : Grid pin
3) Pn : Anode pin
4) NC : No Connected pin
5) NP : No pin

10	9	8	7	6	5	4	3	2	1
5G	6G	7G	8G	9G	10G	NP	NP	F1	F1

32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

A MAIN C.B

TO CD MECHANISM AZG-1 ZD8R0C
FFC602 (6 5 3 1)
TO CN602

FROM DECK1
CON301 (3 1)
TO CN301

FROM DECK2
CON351 (8 7 5 3 1)
TO CN351

TO FRONT C.B
CN701 (1 3 7 9 11 13 15 17 19 21 23 25 27 29)
CN601

J832
MW/LW LOOP

FM 75Ω (COAX1AL)

J602
VIDEO/AUX
R L

J202
PHONES

J203
SPEAKERS
SPEAKER IMP:6Ω

TO PT C.B
WH181
W99 WHT

CN602 (6 5 4 3 2 1)

CN351 (8 7 5 3 1)

CN301 (8 7 5 1)

IC861
IC801
IC601
IC101
IC401
IC301

X861
X991

L811
L802
L801
L951
L942
L832
L451
L101

CF832
CF831

TC942

FFE831

SFR451
SFR452

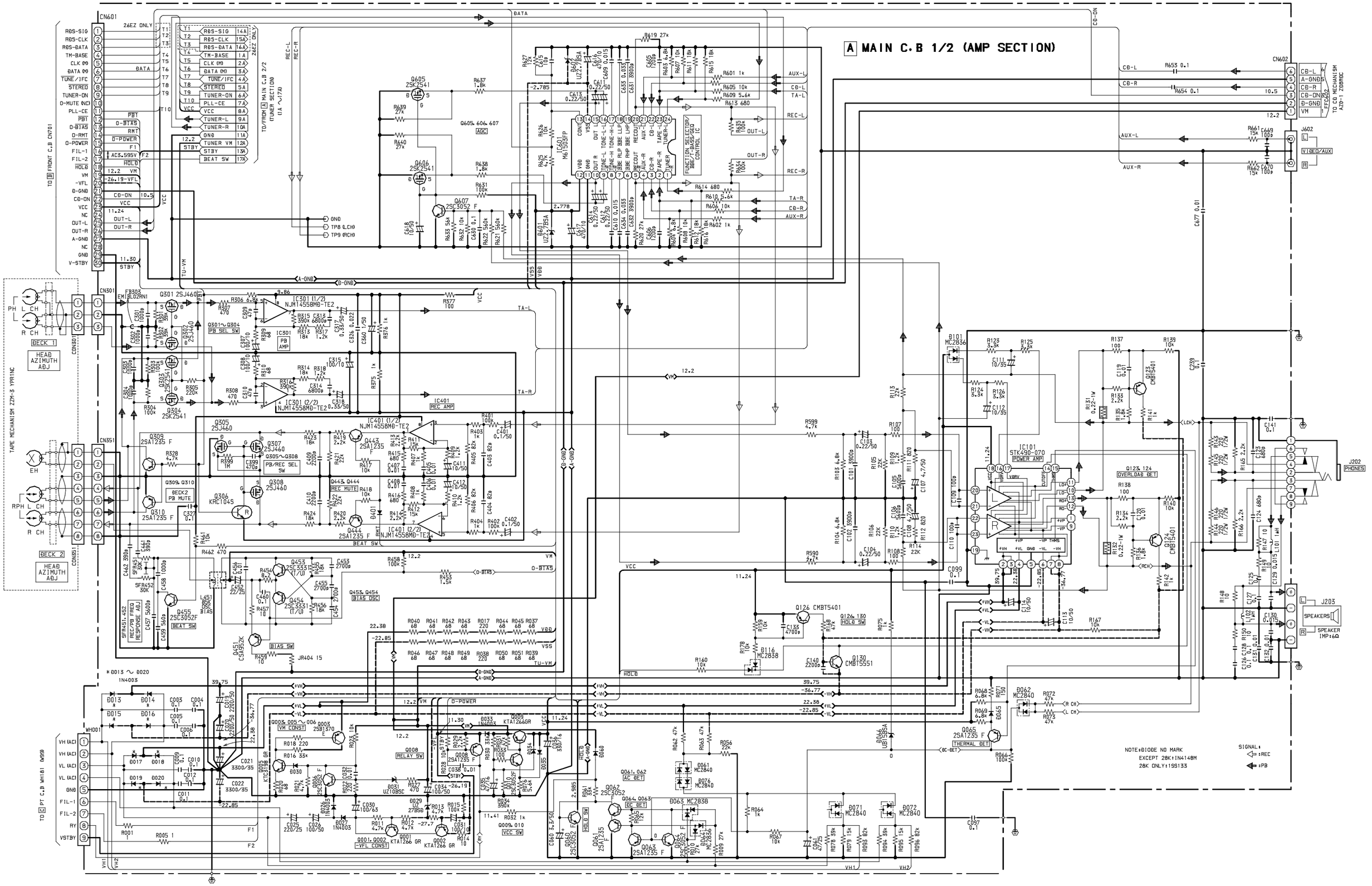
CLP402

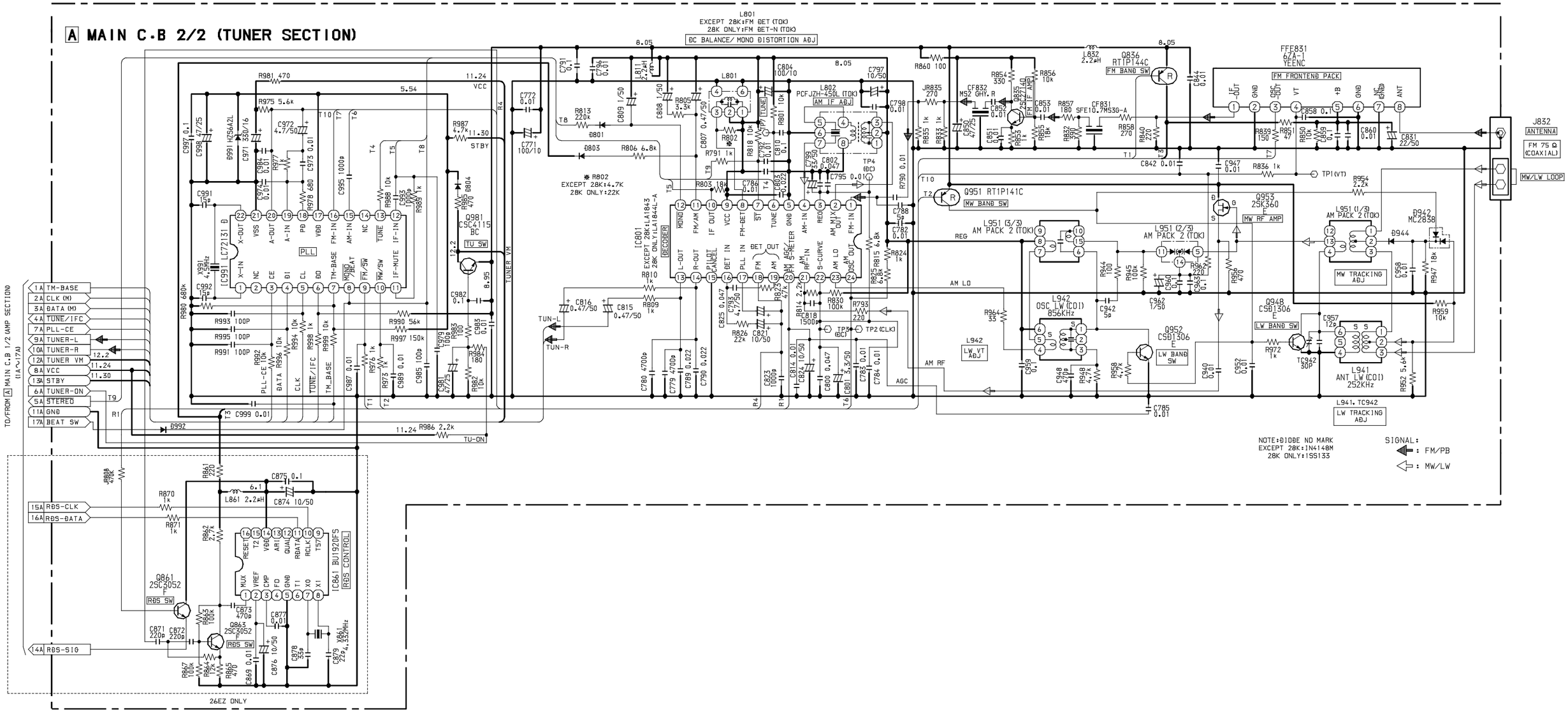
FB303

TP1 (VT)
TP8 (LCH)
TP9 (RCH)
GND

26EZ ONLY

SCHEMATIC DIAGRAM – 1 (MAIN : 1 / 2 <AMP SECTION>)

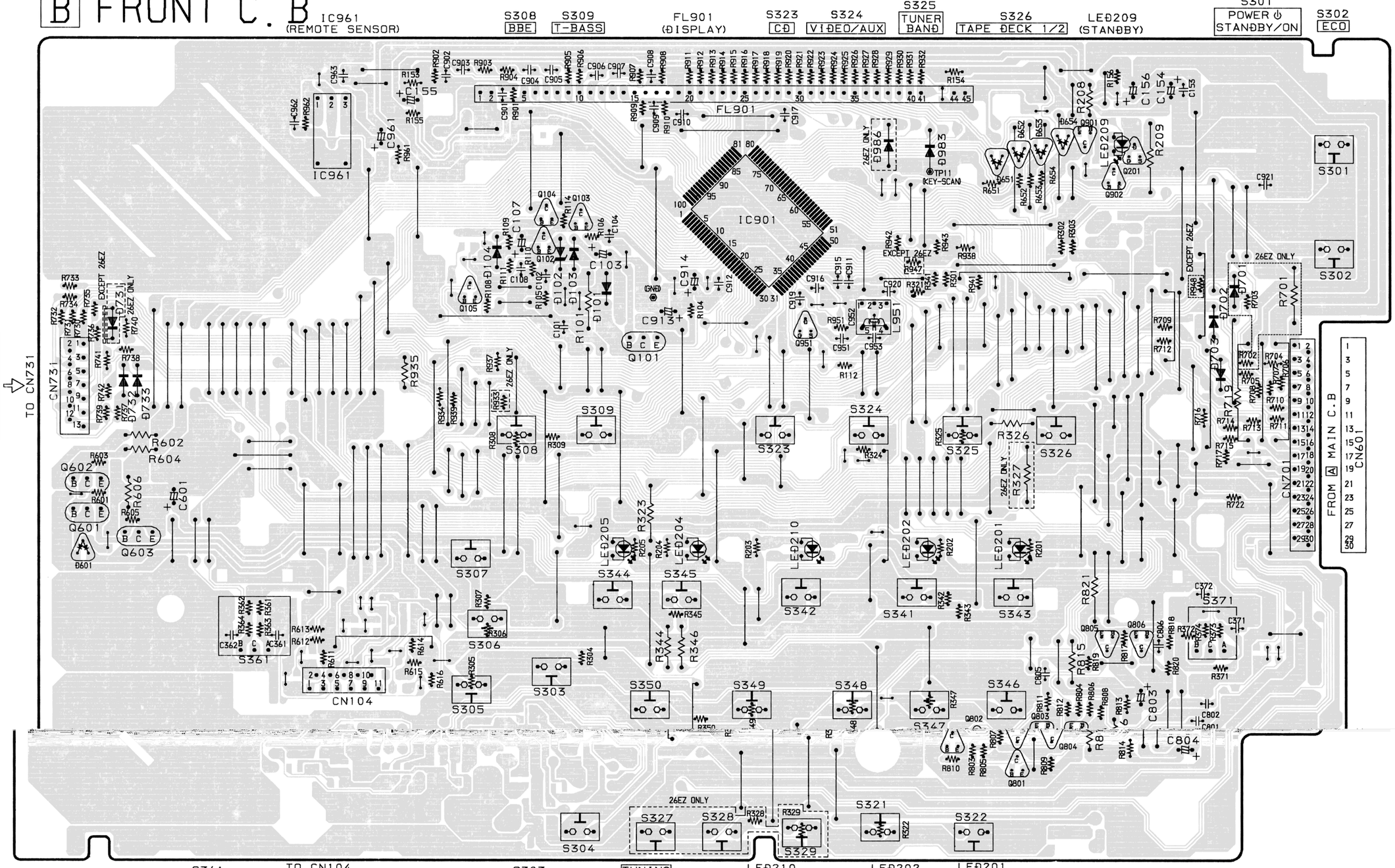



A MAIN C.B 2/2 (TUNER SECTION)
L801
EXCEPT 28K:FM DET (TOK)
28K ONLY:FM DET-N (TOK)
DC BALANCE/ MONO DISTORTION ADJ
L802
PCFJZH-450L (TOK)
AM IF ADJ
FFE831
6ZA-1
YEENC
FM FRONTEND PACK
Q836
RT1P144C
FM BAND SW
Q951 RT1P141C
MW BAND SW
Q953
2SK360
MW RF AMP
IC801
EXCEPT 28K:LA1843
28K ONLY:LA1843L-A
DECODER
Q981
CSC4115
BC
TU SW
LC72131 B
PLL
L951 (3/3)
AM PACK 2 (TOK)
L951 (2/3)
AM PACK 2 (TOK)
L951 (1/3)
AM PACK 2 (TOK)
MW TRACKING ADJ
D942
MC2838
D944
L942
OSC LW (COIL)
856KHz
LW VT ADJ
Q948
CSD1306
E
LW BAND SW
Q952
CSD1306
LW BAND SW
L941
ANT LW (COIL)
252KHz
L941, TC942
LW TRACKING ADJ
J832
ANTENNA
FM 75Ω (COAXIAL)
MW/LW LOOP
TUN-L
TUN-R
TU-ON
TUNER VM
AM LO
AM RF
AGC
REG
NOTE:DIODE NO MARK
EXCEPT 28K:IN4148M
28K ONLY:1SS133
SIGNAL:
: FM/PB
: MW/LW
TO/FROM A MAIN C.B 1/2 (AMP SECTION) (1A~17A)
1A TM-BASE
2A CLK (M)
3A DATA (M)
4A TUNE/IFC
7A PLL-CE
9A TUNER-L
10A TUNER-R
12A TUNER VM
8A VCC
13A STBY
6A TUNER-ON
5A STEREO
11A GND
17A BEAT SW
15A RDS-CLK
16A RDS-DATA
14A RDS-SIG
IC861 BU1920F5
RDS CONTROL
Q861
2SC5052
F
RDS SW
Q863
2SC5052
F
RDS SW
26EZ ONLY

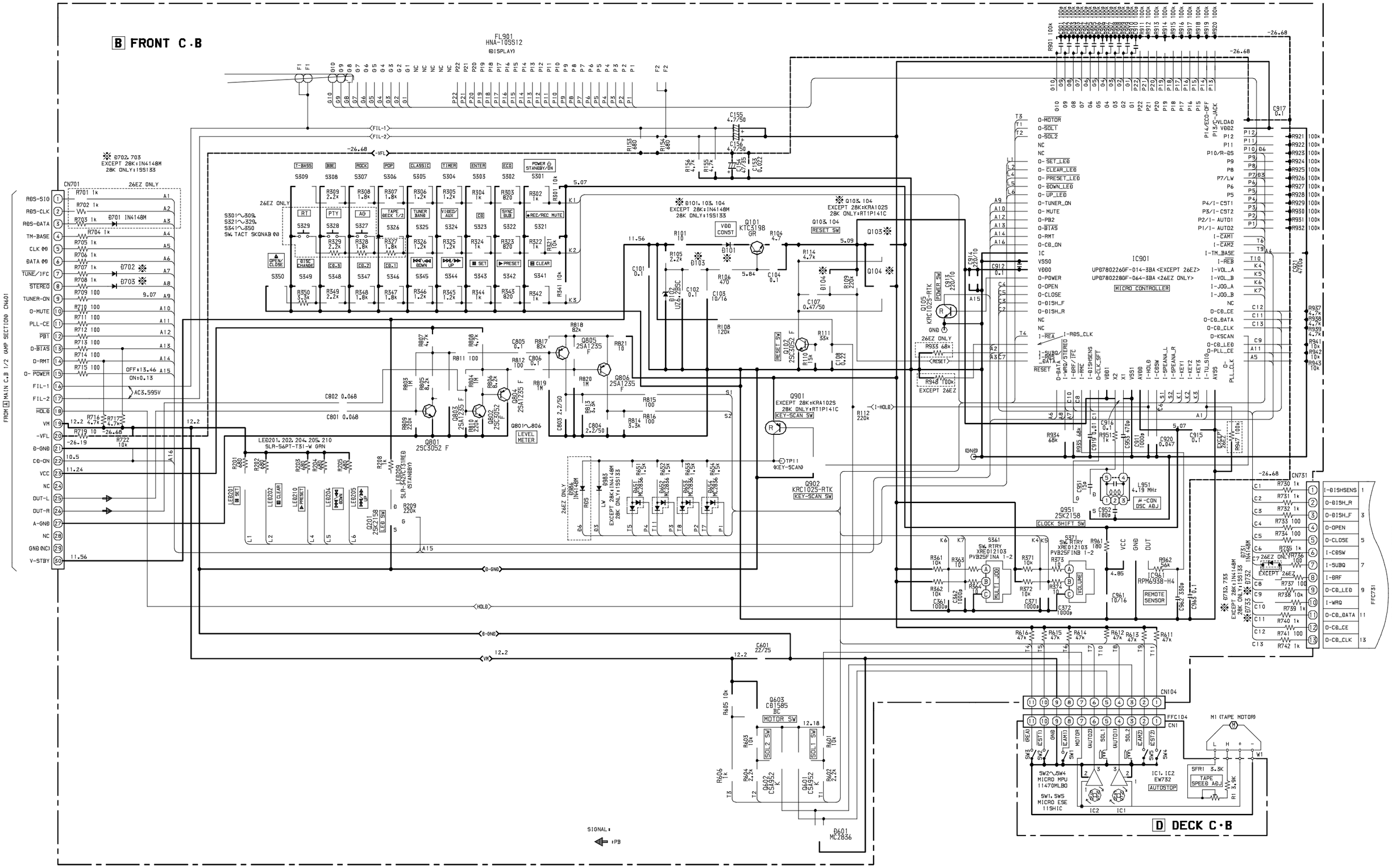
32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

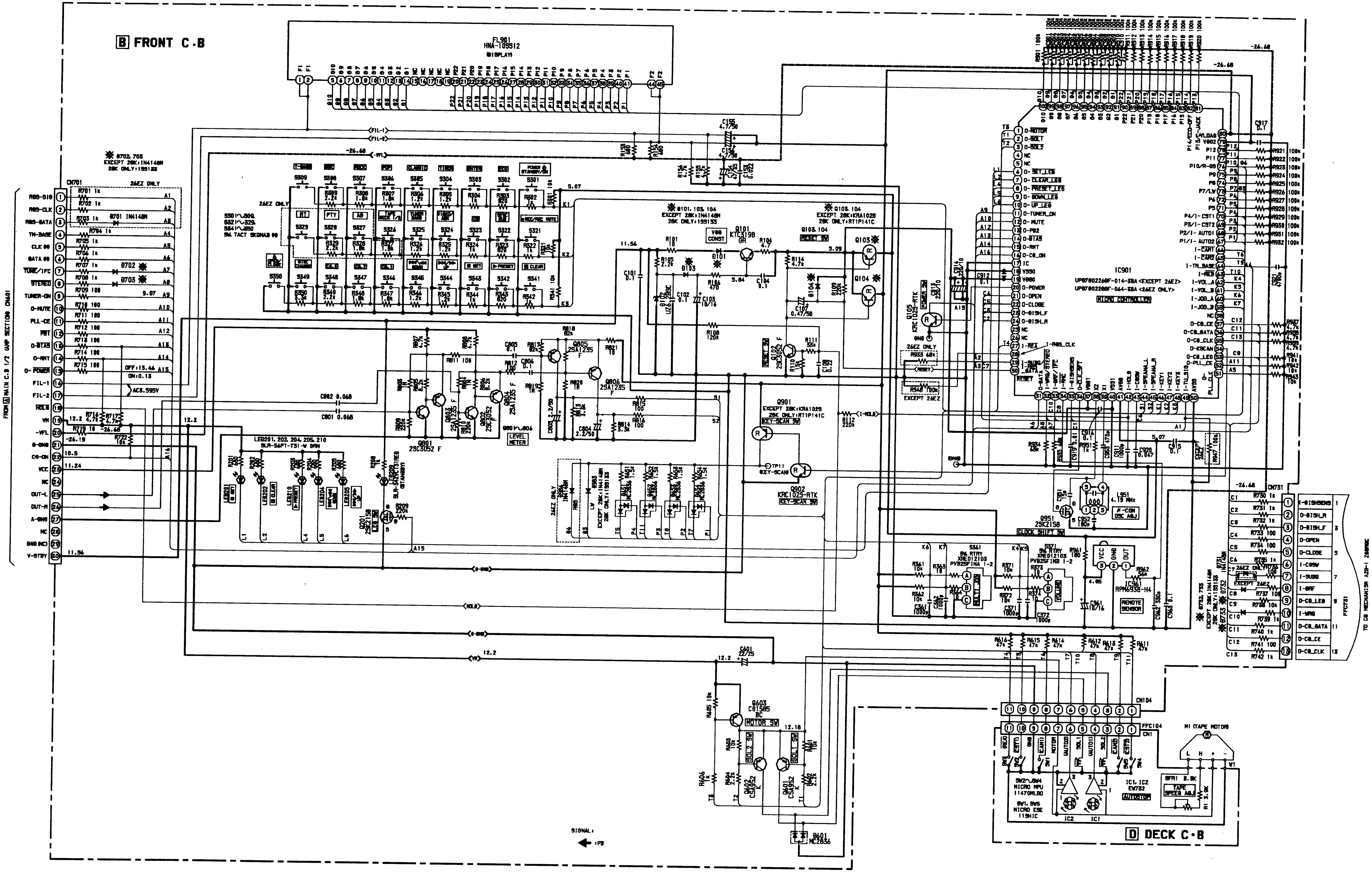
A B C D E F G H I J K L M N O P Q R S T U

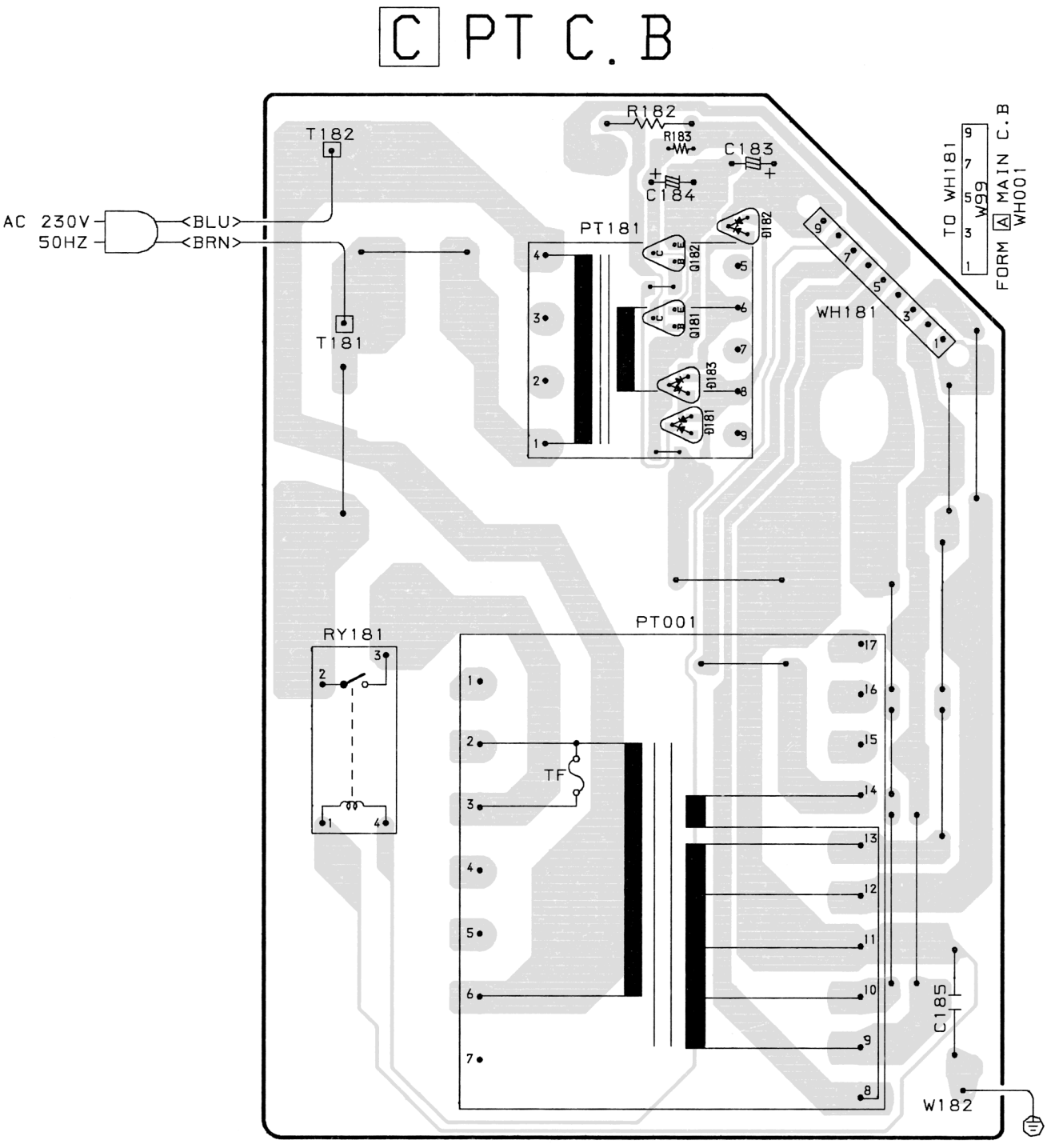
B FRONT C. B



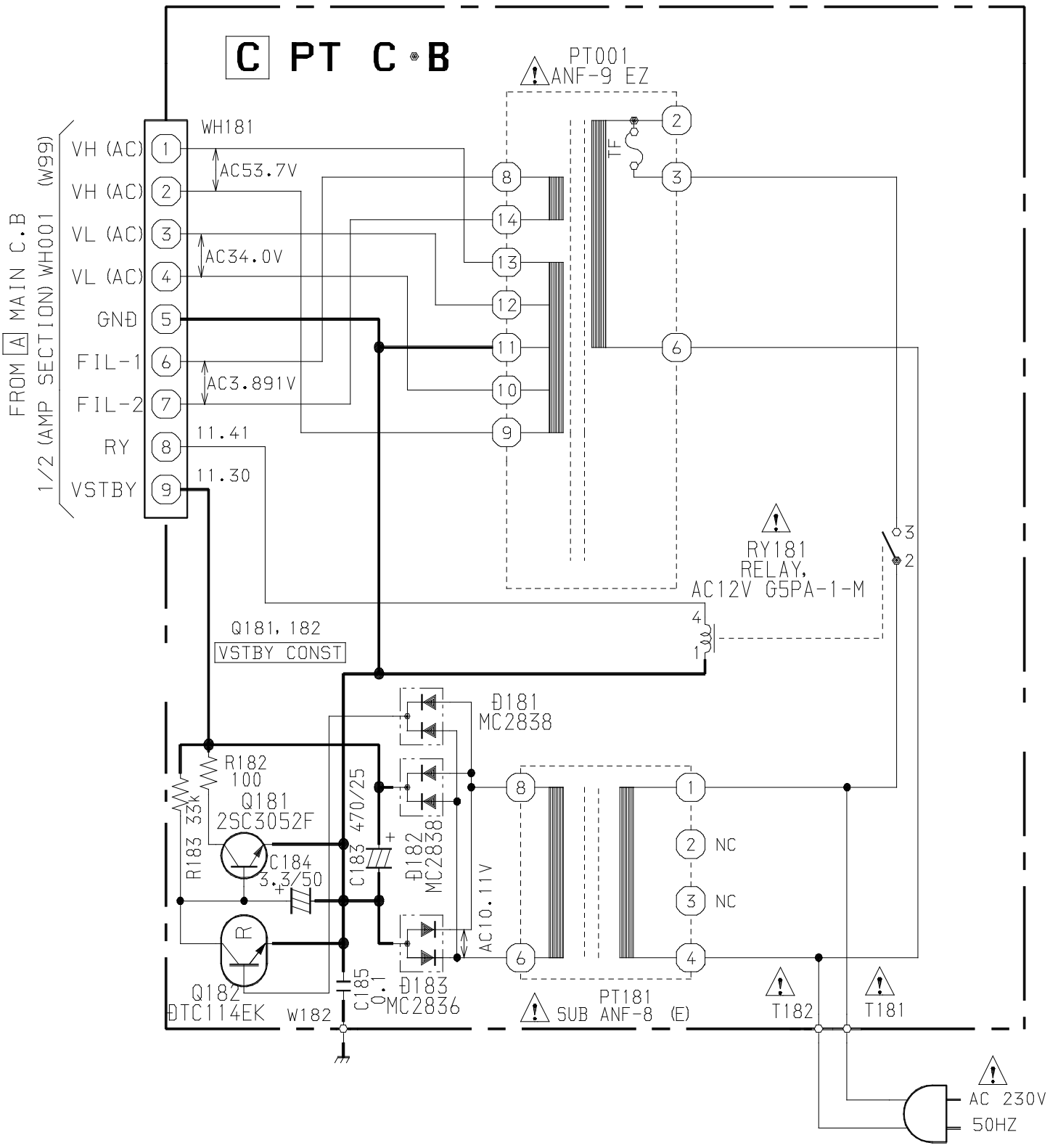
SCHEMATIC DIAGRAM – 3 (FRONT / DECK)



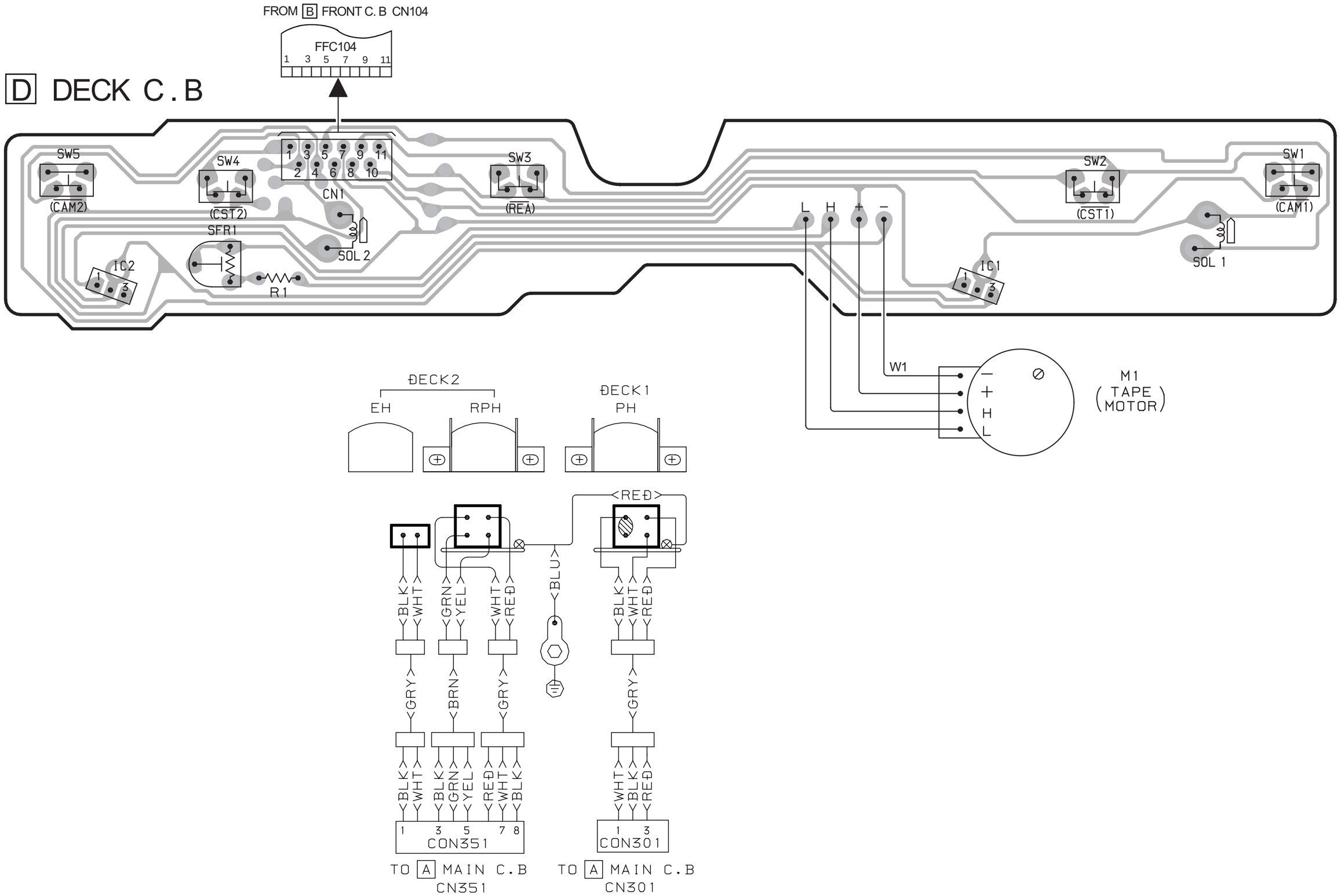

B FRONT C.B
FL901
HNA-10SS12
(DISPLAY)
CN701
26EZ ONLY
IC901
UPD7802260F-014-3BA <EXCEPT 26EZ>
UPD7802260F-064-3BA <26EZ ONLY>
MICRO CONTROLLER
LEVEL METER
KEY-SCAN SW
RESET SW
POWER SW
CLOCK SHIFT SW
REMOTE SENSOR
MOTOR SW
SOL2 SW
SOL1 SW
CN731
CN104
FFC104
CN1
M1 (TAPE MOTOR)
TAPE SPEED ADJ
AUTOSTOP
D DECK C.B
SIGNAL:
:PB


C PT C.B
AC 230V
50HZ
BLU
BRN
T182
T181
R182
R183
C183
C184
PT181
Q182
Q181
D183
D181
WH181
TO WH181
W99
FORM A MAIN C.B
WH001
RY181
PT001
TF
C185
W182

SCHEMATIC DIAGRAM – 4 (PT)

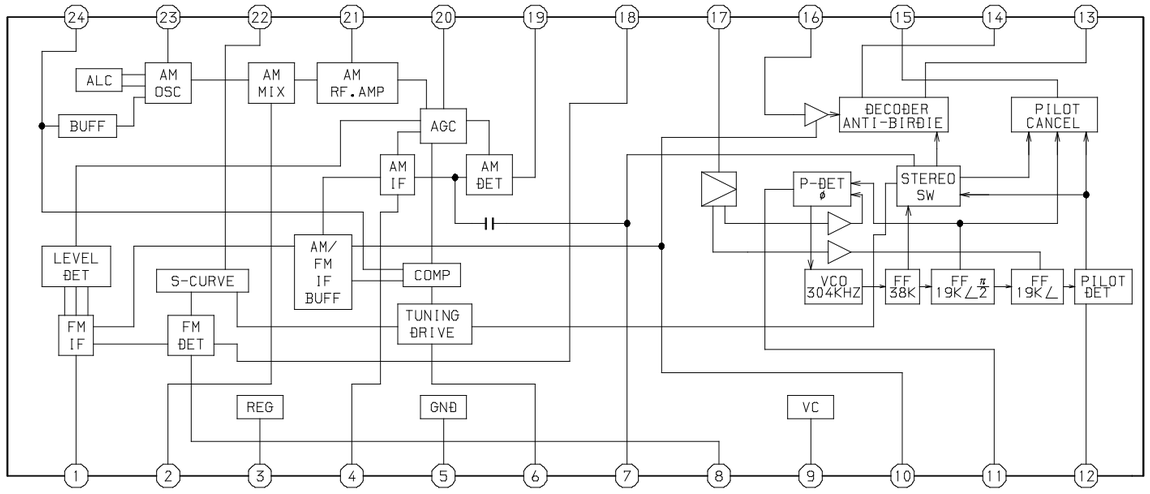


D DECK C.B

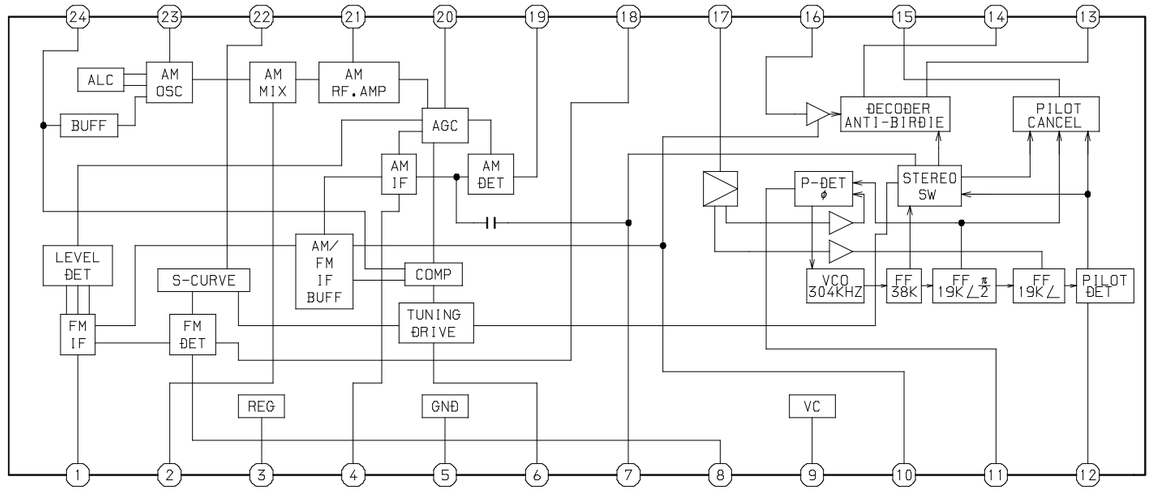

FROM B FRONT C.B CN104
FFC104
1 3 5 7 9 11
SW5
(CAM2)
SW4
(CST2)
SFR1
IC2
R1
CN1
SOL 2
SW3
(REA)
L H + −
SW2
(CST1)
IC1
SW1
(CAM1)
SOL 1
W1
M1
(TAPE MOTOR)
DECK2
EH
RPH
DECK1
PH
<RED>
BLU
BLK WHT
GRN YEL
WHT RED
GRY
BRN
CON351
CON301
TO A MAIN C.B
CN351
TO A MAIN C.B
CN301

IC BLOCK DIAGRAM

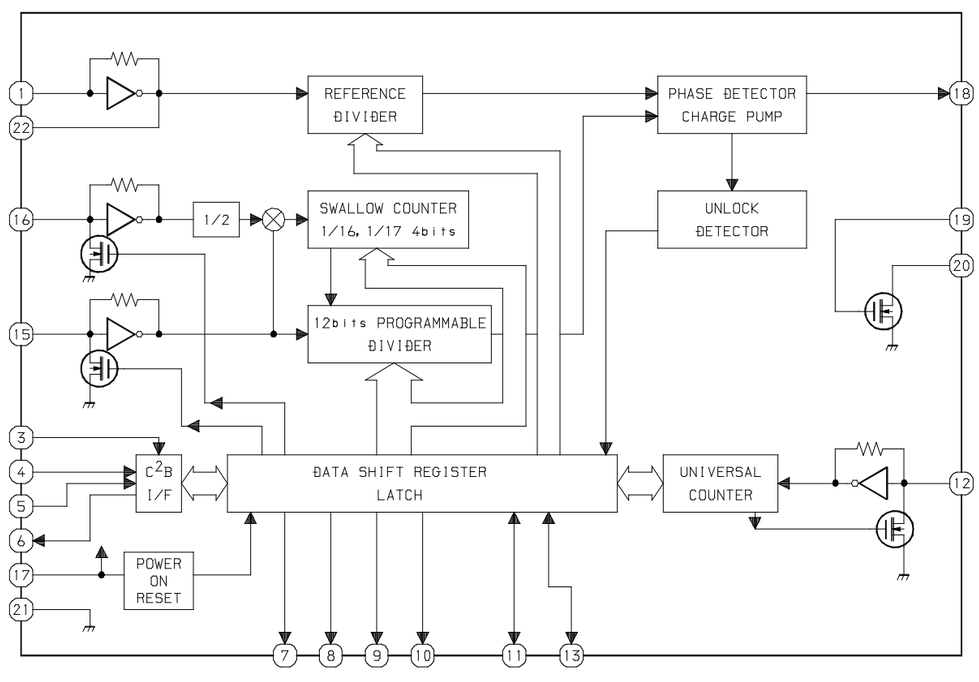
IC, LA1844L-A



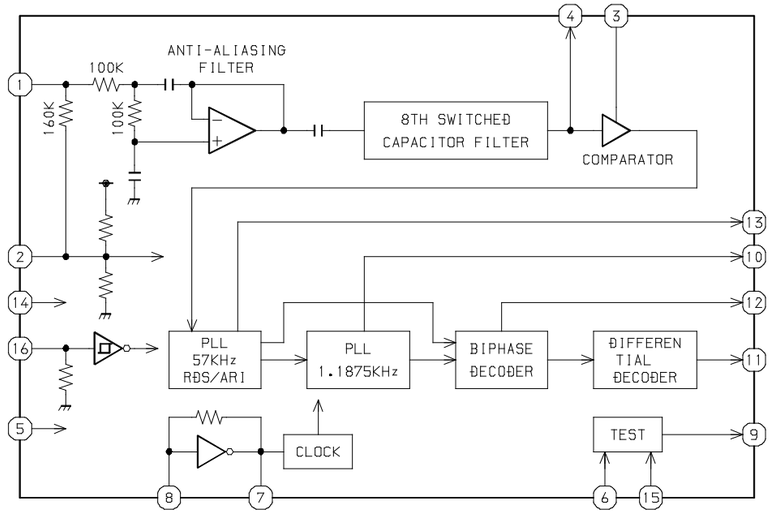
IC, LA1843



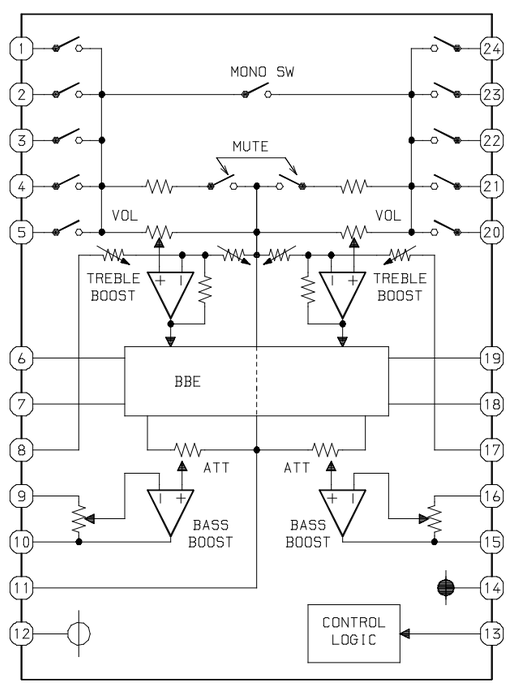
IC, LC72131Đ



IC, BU1920FS



IC, M61503FP



IC DESCRIPTION

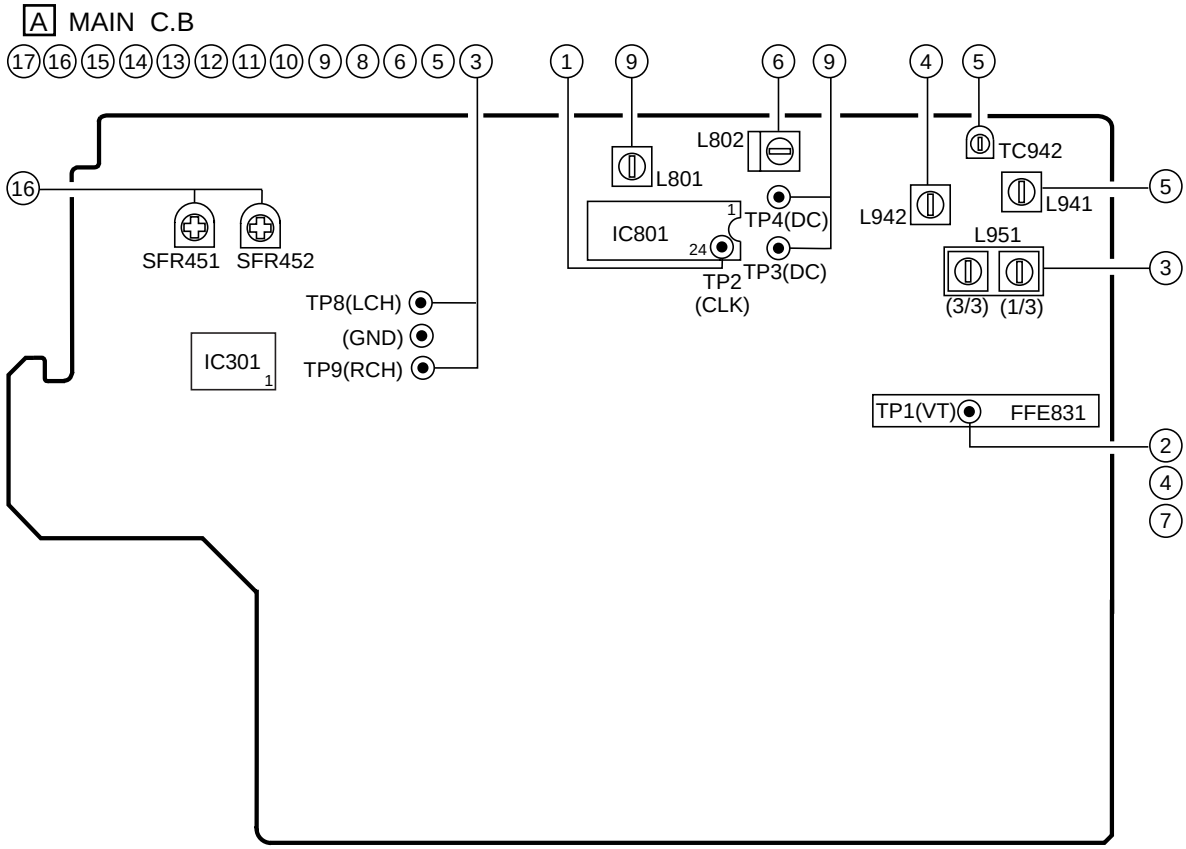
IC, µPD780226GF-014-3BA <EXCEPT 26EZ> / µPD780228GF-064-3BA <26EZ ONLY>

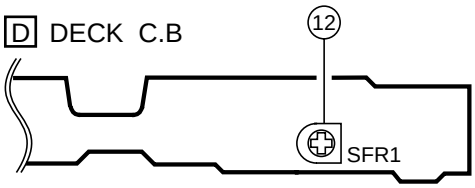
Pin No.	Pin Name	I/O	Description
1	O-$\overline{\text{MOTOR}}$	O	DECK MOTOR ON/OFF output.
2	O-$\overline{\text{SOL1}}$	O	DECK1 solenoid output.
3	O-$\overline{\text{SOL2}}$	O	DECK2 solenoid output.
4	NC	–	Not connected.
5	NC	–	Not connected.
6	O-$\overline{\text{SET\_LED}}$	O	SET LED ON/OFF output.
7	O-$\overline{\text{CLEAR\_LED}}$	O	CLEAR LED ON/OFF output.
8	O-$\overline{\text{PRESET\_LED}}$	O	PRESET LED ON/OFF output.
9	O-$\overline{\text{DOWN\_LED}}$	O	DOWN LED ON/OFF output.
10	O-$\overline{\text{UP\_LED}}$	O	UP LED ON/OFF output.
11	O-TUNER_ON	O	TUNER ON output.
12	O-MUTE	O	MUTE output.
13	O-PB2	O	DECK2/$\overline{\text{DECK1}}$ play output.
14	O-$\overline{\text{BIAS}}$	O	BIAS ON output.
15	O-RMT	O	REC mute output.
16	O-CD_ON	O	CD ON output.
17	IC	–	Internal connection (connected to GND).
18	VSS0	–	GND.
19	VDD0	–	Power supply.
20	O-POWER	O	System power supply $\overline{\text{ON}}$/OFF output.
21	O-OPEN	O	CD tray open data output.
22	O-CLOSE	O	CD tray close data output.
23	O-DISH_F	O	CD turntable forward rotation output.
24	O-DISH_R	O	CD turntable reverse rotation output.
25	NC	–	Not connected.
26	NC	–	Not connected.
27	I-$\overline{\text{REA}}$	I	Deck 2 side-A recordable switch data input. "L" = REC.
28	I-RDS_CLK	I	Tuner RDS clock input<26EZ only>.
29	I-SUBQ/I-RDS_DATA	I	CD SUBQ data input / Tuner RDS data input<26EZ only>.
30	$\overline{\text{RESET}}$	–	System reset.
31	O-DATA	O	Data output for MAIN.
32	I-WRQ/$\overline{\text{STEREO}}$	I	CD WRQ input / Tuner stereo input.
33	I-DRF/$\overline{\text{IFC}}$	I	CD DRF input / Tune IF count serial data input.
34	I-$\overline{\text{RMC}}$	I	System remote control input.
35	I-DISHSENS	I	CD turntable photo sensor input.
36	O-$\overline{\text{CLK\_SFT}}$	O	Micon clock shift output.
37	VDD1	–	Power supply.
38	X2	–	4.19MHz oscillator circuit.
39	X1	–	4.19MHz oscillator circuit.
40	VSS1	–	GND.
41	AVDD	–	Power supply.

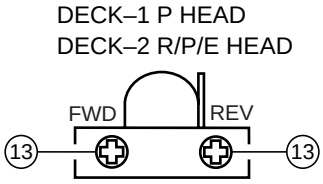
Pin No.	Pin Name	I/O	Description
42	I-HOLD	I	Power failure detected input.
43	I-CDSW	I	CD mecha switch input.
44	I-SPEANA_L	I	A/D L-input for spectrum analyser level display.
45	I-SPEANA_R	I	A/D R-input for spectrum analyser level display.
46	I-KEY1	I	Key1 input.
47	I-KEY2	I	Key2 input.
48	I-KEY3	I	Key3 input.
49	I-TU_SIG	I	Tuner signal input.
50	AVSS	–	GND.
51	O-PLL_CLK	O	PLL clock enable output.
52	O-PLL_CE	O	Chip enable output for tuner PLL.
53	O-CD_LED	O	CD flash window LED ON/OFF output.
54	O-KSCAN	O	Key scan output.
55	O-CD_CLK	O	CD clock output.
56	O-CD_DATA	O	CD data output.
57	O-CD_CE	O	CD enable output.
58	NC	–	Not connected.
59	I-JOG_B	I	Dial jog rotary encoder input B.
60	I-JOG_A	I	Dial jog rotary encoder input A.
61	I-VOL_B	I	Volume rotary encoder input B.
62	I-VOL_A	I	Volume rotary encoder input A.
63	I-$\overline{\text{REB}}$	–	Deck 2 side-B recordable switch data input. "L" = REC. (Not used)
64	I-TM_BASE	I	Base input for clock.
65	I-$\overline{\text{CAM2}}$	I	DECK2 CAM switch data input.
66	I-$\overline{\text{CAM1}}$	I	DECK1 CAM switch data input.
67	P1/I-AUTO2	O/I	FL segment P1 output / DECK2 AUTO STOP switch data input.
68	P2/I-AUTO1	O/I	FL segment P2 output / DECK1 AUTO STOP switch data input.
69	P3/I-CST2	O/I	FL segment P3 output / DECK2 cassette detect switch data input.
70	P4/I-CST1	O/I	FL segment P4 output / DECK1 cassette detect switch data input.
71 ~ 72	P5, P6	O	FL segment P5 ~ P6 output.
73	P7/LW	O/I	FL segment P7 output / LW mode data input.
74 ~ 75	P8 ~ P9	O	FL segment P8 ~ P9 output.
76	P10/RDS	O/I	FL segment P10 output / RDS data input<26EZ only>.
77 ~ 78	P11 ~ P12	O	FL segment P11 ~ P12 output.
79	VDD2	–	Power supply.
80	VLOAD	–	Power supply for FL display.
81	P13/C-JACK	O/I	FL segment P13 output / C-JACK data input (not used).
82	P14/ECO-OFF	O/I	FL segment P14 output / ECO-OFF data input (not used).
83 ~ 90	P15 ~ P22	O	FL segment P15 ~ P22 output.
91 ~100	G1 ~ G10	O	FL grid G1 ~ G10 output.

IC, LC72131D

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>X-IN</td><td>I</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>X-OUT</td><td>O</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not connected.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU (μPD780226GF / μPD780228GF) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU (μPD780226GF / μPD780228GF).</td></tr>
<tr><td>7</td><td>TM-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when MONO / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / $\overline{\text{SW}}$</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$ / SW</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not connected.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor used for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>







< TUNER SECTION >

1. Clock frequency Check
   Settings : • Test point : TP2 (CLK)
   Method : Set to MW 1602kHz and check that the test point is 2052kHz ± 45Hz.

2. MW VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531kHz and check that the test point is more than 0.6V.

3. MW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : L951(1/3)
   Method : Set to MW 999kHz and adjust L951(1/3) so that the test point becomes maximum.

4. LW VT Adjustment
   Settings : • Test point : TP1 (VT)
   • Adjustment location : L942
   Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V ± 0.05V. Then set to LW 290kHz and check that the test point is less than 8.0V.

5. LW Tracking Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L941 ..... 144kHz
   TC942 ..... 290kHz
   Method : Set up TC942 to center before adjustment.
   The level at 144kHz is adjusted to MAX. by L941.
   Then the level at 290kHz is adjusted to MAX. by TC942.

6. AM IF Adjustment
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location :
   L802 ..... 450kHz

7. FM VT Check
   Settings : • Test point : TP1 (VT)
   Method : Set to FM 87.5MHz check that the test point is more than 0.5V. Then set to FM 108.0MHz and check that the test point is less than 8.0V.

8. FM Tracking Check
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   Method : Set to FM 98.0MHz and check that the test point is less than 13dBμV.

9. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP3, TP4 (DC)
   TP8, TP9 (Distortion)
   • Adjustment location : L801
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes 0V ± 300mV with minimum distortion.

10. Output Level Check
   <MW>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   Method : Set to MW 999kHz and check that the test point is 40mV ± 3dB.

   <FM>
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   Method : Set to FM 98.0MHz and check that the test point is 140mV ± 3dB.

11. FM Separation Check
   Settings : • Test point : TP8 (Lch), TP9 (Rch)
   • Input level : 60dBμV
   Method : Set to FM 98.0MHz and check that the test point is more than 12dB.

< DECK SECTION >

12. Tape Speed Adjustment (DECK 2)
   Settings : • Test tape : TTA–100
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : SFR1
   Method : Play back the test tape and adjust SFR1 so that the test point becomes 3000Hz ± 5Hz (FWD) and FWD SPEED ± 45Hz (REV) with respect to forward speed.

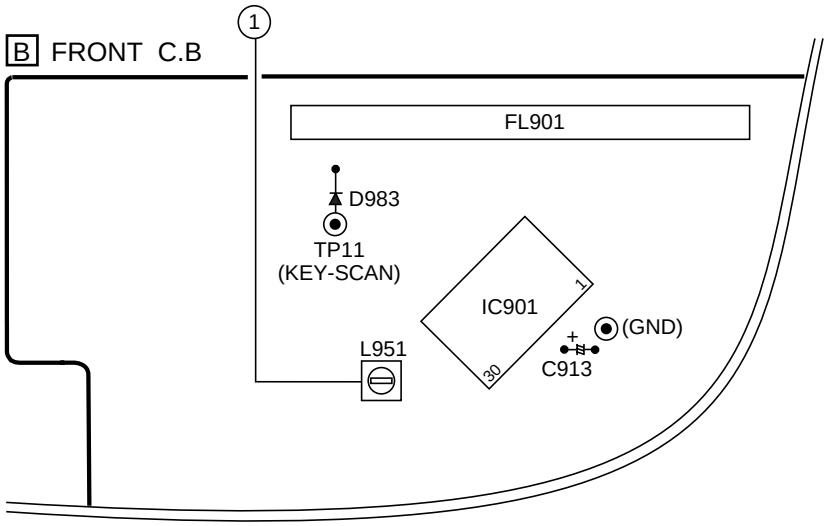
13. Head Azimuth Adjustment (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8 (Lch), TP9 (Rch)
   • Adjustment location : Head azimuth adjustment screw
   Method : Play back (FWD) the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

14. PB Frequency Response Check (DECK 1, DECK 2)
   Settings : • Test tape : TTA–330
   • Test point : TP8 (Lch), TP9 (Rch)
   Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is 0dB ± 5dB.

15. PB Sensitivity Check (DECK 1, DECK 2)
   Settings : • Test tape : TTA–200
   • Test point : TP8 (Lch), TP9 (Rch)
   Method : Play back the test tape and check that the output level of the test point is 110mV ± 3dB.

16. REC/PB Frequency Response Adjustment (DECK 2)
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 1kHz / 8kHz (–20VU / –26dBV)
   • Adjustment location : SFR451 (Lch) SFR452 (Rch)
   Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 5.5mV ~ 9.5mV. Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

17. REC/PB Sensitivity Check (DECK 2)
   Settings : • Test tape : TTA–602
   • Test point : TP8 (Lch), TP9 (Rch)
   • Input signal : 1kHz (0VU / –6dBV)
   Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 55mV ~ 95mV. Record and play back the 1kHz signals and check that the output is –1dB ± 3.5dB.

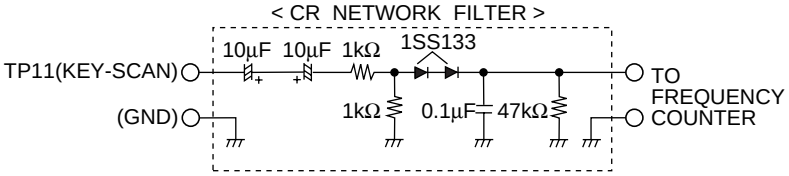


< FRONT SECTION >

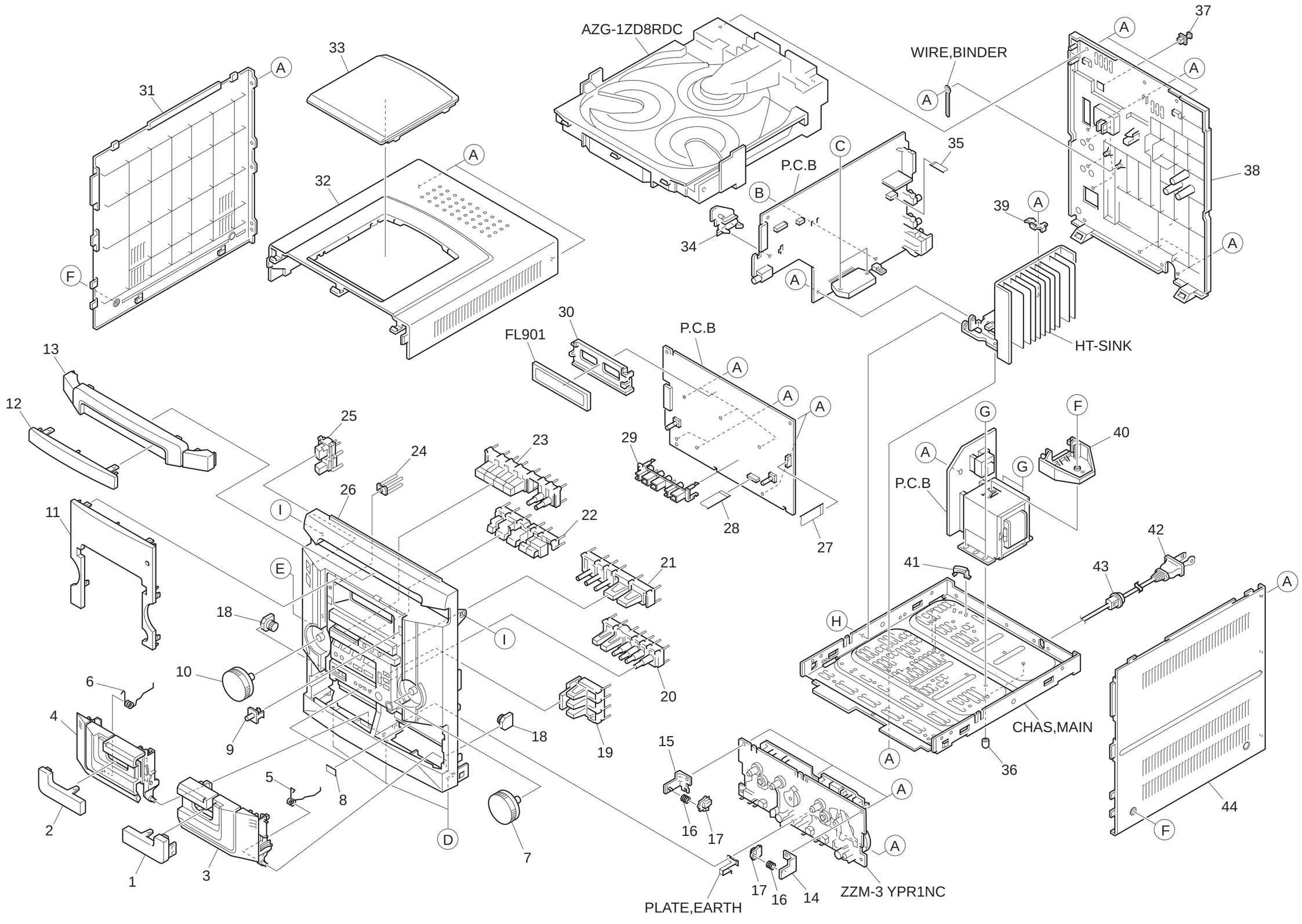
1. μ-CON OSC Adjustment

Settings : • Test point : TP11 (KEY-SCAN), (GND)
• Adjustment location : L951

Method : Connect a frequency counter across TP11 and GND via a CR network filter as shown below.
Then adjust L951 so that the test point becomes 184.94Hz ± 0.18Hz.



MECHANICAL EXPLODED VIEW 1 / 1 (NSX–BL24 / 26 / 28) <EZ>, (NSX–BL24) <K>



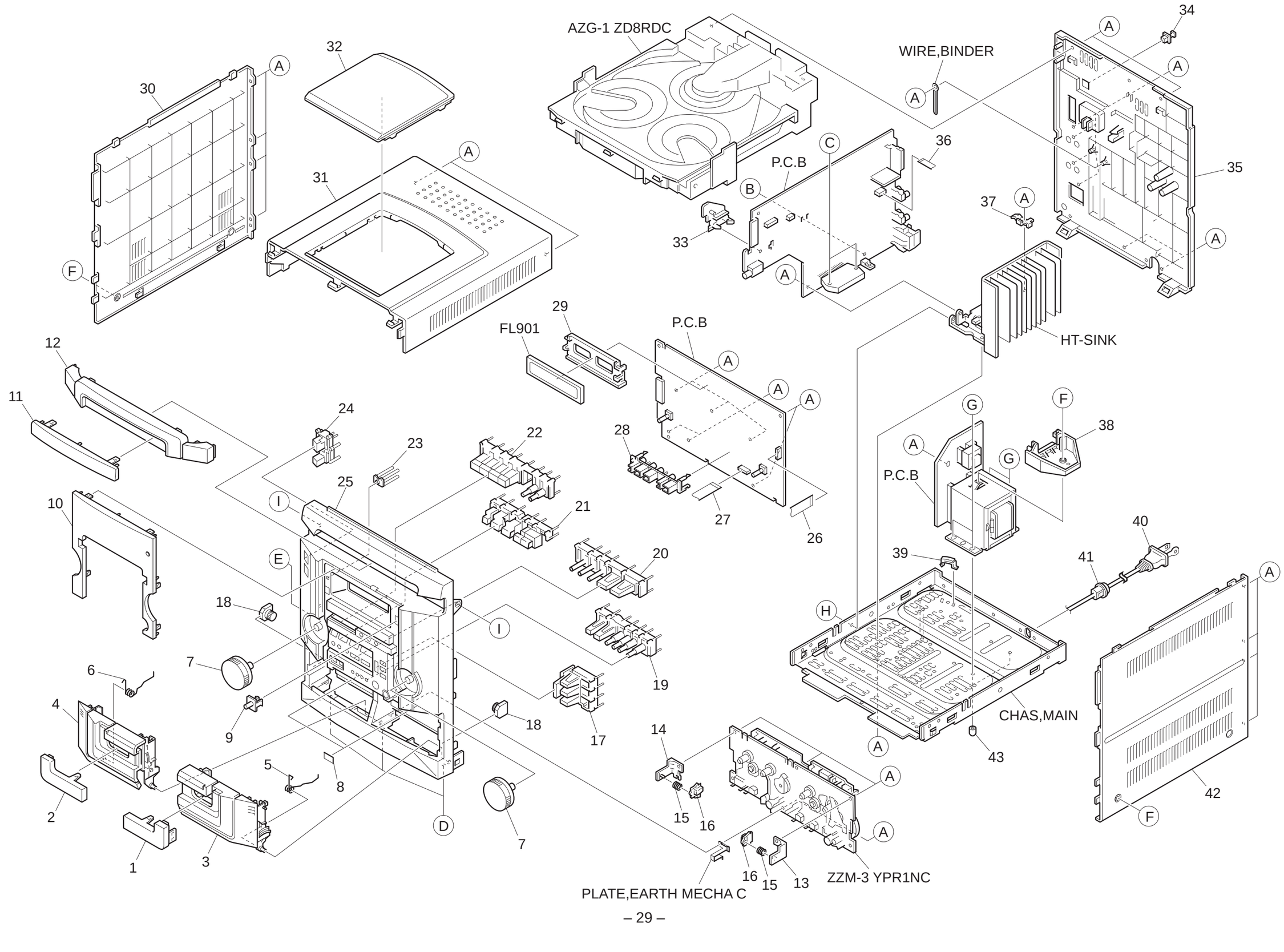
MECHANICAL PARTS LIST 1 / 1 (NSX–BL24 / 26 / 28) <EZ>, (NSX–BL24) <K>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF0-007-010		WINDOW,CASS 2
2	8A-NF0-006-010		WINDOW,CASS 1
3	8A-NF0-004-010		BOX,CASS 2
4	8A-NF0-003-010		BOX,CASS 1
5	8A-NF8-208-010		SPR-T,EJECT 2
6	8A-NF8-207-010		SPR-T,EJECT 1
7	8A-NF0-016-010		KNOB,RTRY JOG
8	81-532-080-010		LABEL, CASS. COMPT
9	8A-NF0-056-010		LENS,REMOCON
10	8A-NF0-016-010		KNOB,RTRY VOL
11	8A-NF0-050-010		WINDOW,DISP EZR<NBL26EZSC>
11	8A-NF0-005-010		WINDOW,DISP U<EXCEPT NBL26EZSC>
12	8A-NF0-038-010		WINDOW,CD
13	8A-NF0-014-010		PANEL,TRAY
14	87-NF4-217-110		HLDR,LOCK 2
15	87-NF4-216-010		HLDR,LOCK 1
16	86-NF9-224-010		SPR-C,LOCK
17	82-NF5-229-010		PLATE,LOCK
18	8A-NF8-209-010		OIL-DMPR,120
19	8A-NF0-025-010		KEY,ENTER
20	8A-NF0-048-010		KEY,RDS<NBL26EZSC>
20	8A-NF0-018-010		KEY,SYNC<EXCEPT NBL26EZSC>
21	8A-NF0-019-010		KEY,CD
22	8A-NF0-010-010		KEY,ASSY OPE 1 WAY
23	8A-NF0-009-010		KEY,FUN
24	8A-NF0-021-010		REFLECTOR,ECO
25	8A-NF0-008-010		KEY,POWER
26	8A-NF0-029-010		CABI,FR EZ 28<NBL28EZSC>
26	8A-NF0-030-010		CABI,FR EZR26<NBL26EZSC>
26	8A-NF0-026-010		CABI,FR LH 24<NBL24KSC,NBL24EZSC>
27	88-913-301-110		FF-CABLE,13P-1.25
28	88-911-101-110		FF-CABLE,11P 1.25
29	8A-NF0-201-010		GUIDE,OPE 1 WAY
30	82-NF7-210-110		GUIDE,FL (*)
31	8A-NF8-007-010		PANEL,LEFT V-2
32	8A-NF8-005-010		PANEL,TOP
33	8A-NF8-006-010		WINDOW,TOP
34	8A-NF8-206-010		HLDR,PWB M
35	88-906-251-110		FF-CABLE,6P 1.25
36	8Z-NB8-240-010		COVER, PL
37	84-ZG1-245-210		CAP,OPTICAL
38	8A-NF0-065-010		CABI,REAR EZSC 24<NBL24EZSC>
38	8A-NF0-066-010		CABI,REAR EZSC 26R<NBL26EZSC>
38	8A-NF0-067-010		CABI,REAR EZSC 28<NBL28EZSC>
38	8A-NF0-064-010		CABI,REAR KSC<NBL24KSC>
39	8A-NF8-205-010		HLDR,IC
40	8A-NF9-211-010		HLDR,PWB PT HI
41	87-NF4-221-010		HLDR,CABLE
⚠ 42	87-A80-157-010		AC CORD ASSY,E BLK CC
43	87-085-185-010		BUSHING, AC CORD (E) CM-22B
44	8A-NF8-008-010		PANEL,RIGHT V-2
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
C	87-067-581-010		TAPPING SCREW, BVT2+3-15
D	87-067-689-010		TAPPING SCREW, BVTT+3-8
E	87-723-096-410		QT2+3-10W/O SLOT BL
F	87-067-641-010		UTT2+3-8(W/O SLOT)BL
G	87-078-191-010		S-SCREW,IT+4-10
H	87-721-096-410		QT2+3-10 GLD
I	87-721-097-410		QT2+3-12 GLD

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange		

MECHANICAL EXPLODED VIEW 1 / 1 (NSX–BL28) <K>



MECHANICAL PARTS LIST 1 / 1 (NSX–BL28) <K>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF0-007-010		WINDOW,CASS 2
2	8A-NF0-006-010		WINDOW,CASS 1
3	8A-NF0-004-010		BOX,CASS 2
4	8A-NF0-003-010		BOX,CASS 1
5	8A-NF8-208-010		SPR-T,EJECT 2
6	8A-NF8-207-010		SPR-T,EJECT 1
7	8A-NF0-016-010		KNOB,RTRY VOL
8	81-532-080-010		LABEL, CASS. COMPT
9	8A-NF0-056-010		LENS,REMOCON
10	8A-NF0-005-010		WINDOW,DISP U
11	8A-NF0-038-010		WINDOW,CD
12	8A-NF0-014-010		PANEL,TRAY
13	87-NF4-217-110		HLDR,LOCK 2
14	87-NF4-216-010		HLDR,LOCK 1
15	86-NF9-224-010		SPR-C,LOCK
16	82-NF5-229-010		PLATE,LOCK
17	8A-NF0-025-010		KEY,ENTER
18	8A-NF8-209-010		OIL-DMPR,120
19	8A-NF0-018-010		KEY,SYNC
20	8A-NF0-019-010		KEY,CD
21	8A-NF0-010-010		KEY,ASSY OPE 1 WAY
22	8A-NF0-009-010		KEY,FUN
23	8A-NF0-021-010		REFLECTOR,ECO
24	8A-NF0-008-010		KEY,POWER
25	8A-NF0-029-010		CABI,FR EZ 28
26	88-913-301-110		FF-CABLE,13P-1.25
27	88-911-101-110		FF-CABLE,11P 1.25
28	8A-NF9-201-010		GUIDE,OPE 1 WAY
29	82-NF7-210-110		GUIDE,FL (*)
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31	8A-NF8-005-010		PANEL,TOP
32	8A-NF8-006-010		WINDOW,TOP
33	8A-NF8-206-010		HLDR,PWB M
34	84-ZG1-245-210		CAP,OPTICAL
35	8A-NF0-071-010		CABI,REAR KSC 28
36	88-906-251-110		FF-CABLE,6P 1.25
37	8A-NF8-216-010		HLDR,IC C
38	8A-NF9-211-010		HLDR,PWB PT HI
39	87-NF4-221-010		HLDR,CABLE
⚠ 40	87-A80-157-010		AC CORD ASSY,E BLK CC
41	87-085-185-010		BUSHING, AC CORD (E)
42	8A-NF8-008-010		PANEL,RIGHT V-2
43	8Z-NB8-240-010		COVER, PL
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
C	87-067-581-010		TAPPING SCREW, BVT2+3-15
D	87-067-689-010		TAPPING SCREW, BVTT+3-8
E	87-723-096-410		QT2+3-10W/O SLOT BL
F	87-067-641-010		UTT2+3-8(W/O SLOT)BL
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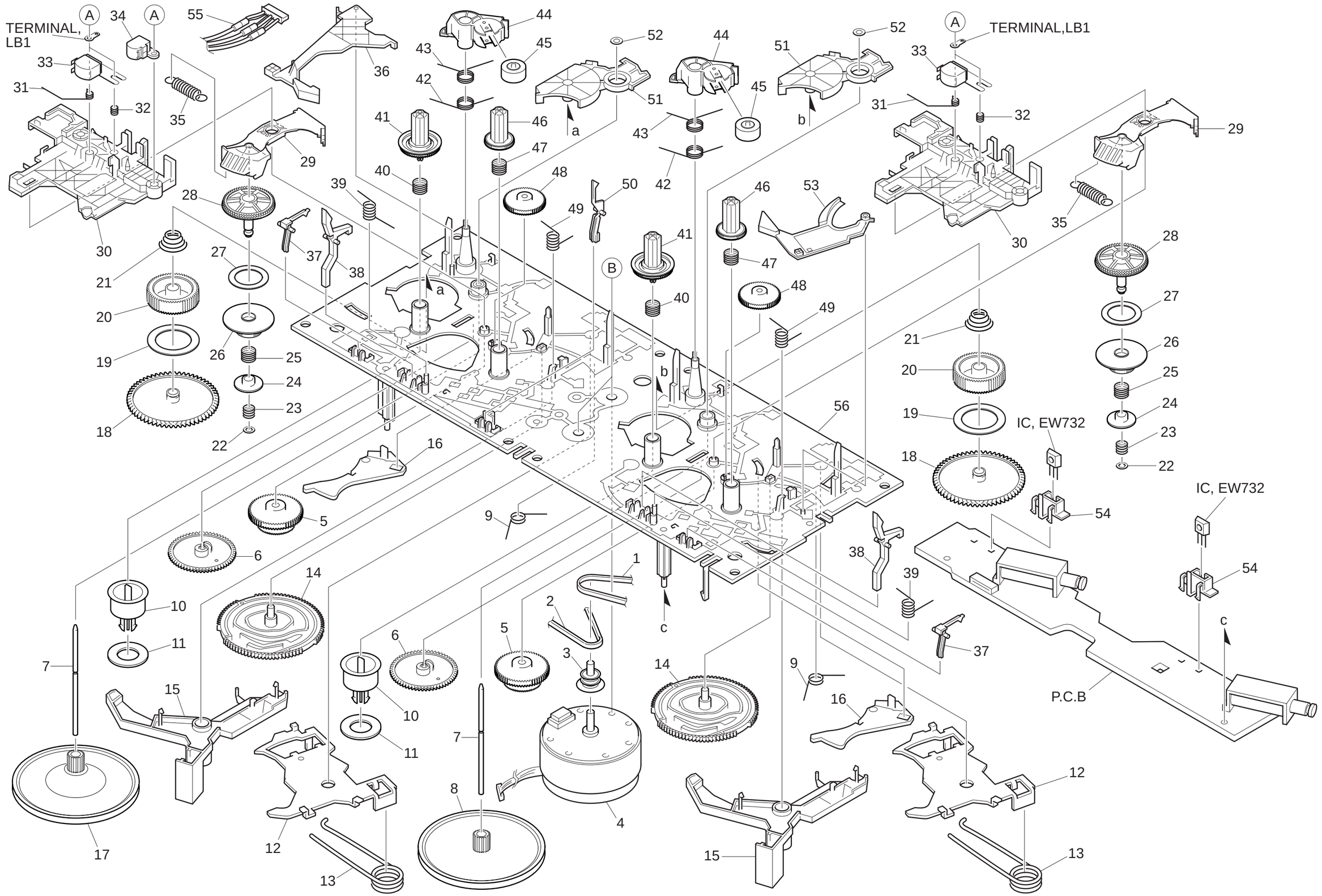
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange		

TAPE MECHANISM EXPLODED VIEW 1 / 1



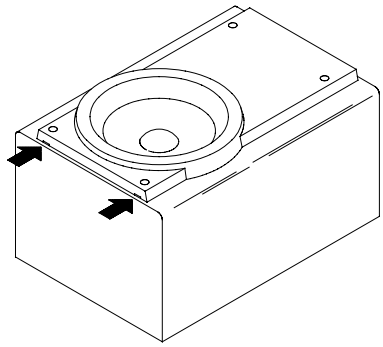
TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3
2	8Z-ZM3-235-010		BELT,MAIN L
3	8Z-ZM1-235-010		PULLEY,MOT
4	87-045-347-010		MOT,SHU2L 70
5	8Z-ZM1-232-010		GEAR,IDL FF/REW
6	8Z-ZM3-244-010		GEAR,CAM TD20
7	8Z-ZM3-242-010		SHAFT,CAP M3
8	8Z-ZM3-228-010		FLY-WHL,M3
9	8Z-ZM3-231-010		SPR-T,TRIG
10	8Z-ZM3-213-010		CLR,MG
11	82-ZM3-616-010		RING MAGNET 4
12	8Z-ZM3-243-010		LEVER ASSY,HD UP
13	8Z-ZM3-238-010		SPR-T,HD UP
14	8Z-ZM3-219-010		GEAR,CAM M3
15	8Z-ZM3-206-010		LEVER,TRIG
16	8Z-ZM3-209-010		LEVER,CAM FR
17	8Z-ZM2-211-010		FLY-WHL,ZZM-2
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B
19	8Z-ZM1-265-010		FELT,T-UP
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP
22	8Z-ZM1-275-010		W-L,1,47-4-0.25
23	8Z-ZM1-257-010		SPR-C,F/R
24	8Z-ZM1-236-010		CLR,SLIP FF/REW
25	8Z-ZM3-226-010		SPR-C,FR M3
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3
27	8Z-ZM1-269-010		FELT,FF/REW 2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2
29	8Z-ZM3-220-010		LEVER,FR M3
30	8Z-ZM3-205-010		LEVER,PLAY M3
31	8Z-ZM3-233-010		SPR-T,BRG M3
32	84-ZM2-227-310		SPR-C,AZIMUTH
33	87-A90-403-110		HEAD,RPH MS15R
34	87-A90-404-010		HEAD,EH LE15B
35	8Z-ZM3-239-010		SPR-E,FR
36	8Z-ZM3-211-010		LEVER,EJECT R
37	8Z-ZM3-225-010		LEVER,STOP
38	8Z-ZM3-221-010		LEVER,CAS
39	8Z-ZM3-234-010		SPR-T,LVR CAS
40	8Z-ZM3-223-010		SPR-C,REEL R M3
41	8Z-ZM1-225-110		GEAR,REEL R
42	8Z-ZM3-240-010		SPR-T,T-UP M3
43	8Z-ZM3-237-010		SPR-T,PINCH M3
44	8Z-ZM3-215-010		LEVER,PINCH M3
45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
46	8Z-ZM1-226-010		GEAR,REEL L
47	8Z-ZM3-222-010		SPR-C,REEL L M3
48	8Z-ZM3-251-010		GEAR,IDL REW M3
49	8Z-ZM3-236-010		SPR-T,PLAY M3
50	82-ZM1-240-110		LVR,REC(*)
51	8Z-ZM3-216-010		LEVER,T-UP M3
52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
53	8Z-ZM3-212-010		LEVER,EJECT L
54	8Z-ZM3-214-010		HLDR,IC
55	86-ZM3-605-110		CONN ASSY,8P -RPB
56	8Z-ZM3-203-010		CHAS ASSY,M3
A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
B	8Z-ZM2-220-110		V+2.6 ZZM-2

SPEAKER DISASSEMBLY INSTRUCTIONS

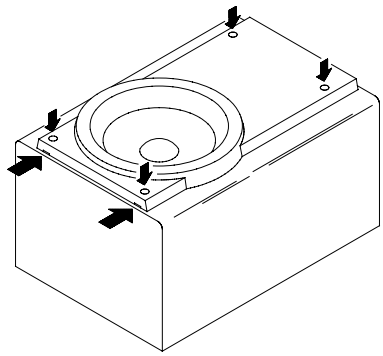
Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



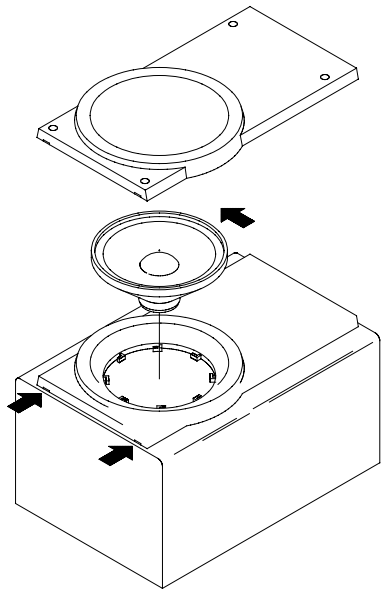
Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

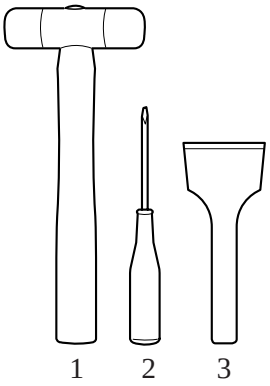


Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



Type.4



TOOLS

1 Plastic head hammer
2 flat head screwdriver
3 Cut chisel

How to Remove the PANEL, FR

1. Insert the flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.

2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.

3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

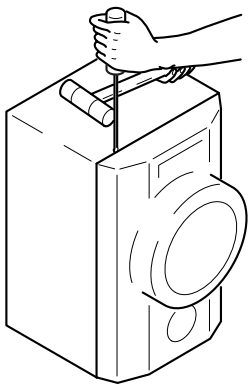


Fig-1

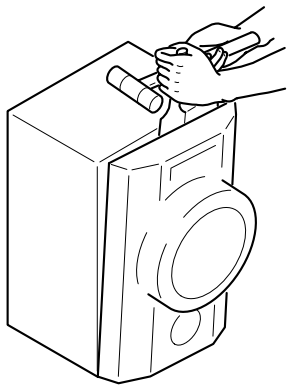


Fig-2

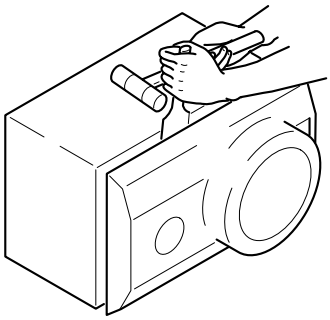


Fig-3

How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

SPEAKER PARTS LIST
(SX–NBL25 / SX–NBL26) <YSC9>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NSA-001-010		PANEL,FR
2	8A-NSA-003-010		GRILLE,FRAME ASSY<25YSC9>
2	8A-NSA-012-010		GRILLE,FRAME ASSY RDS<26YSC9>
3	8A-NSK-602-010		SPKR,W 140
4	8A-NSK-606-010		SPKR,T 60
5	87-NSH-612-010		CERAMIC ASSY
6	87-NS7-611-010		CORD,SPKR

SPEAKER PARTS LIST
(SX–NBL28) <YSC9>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-YS8-001-010		PANEL,FR
2	8A-YS8-003-010		GRILLE,FRAME ASSY
3	8A-YS8-007-010		TERMINAL,PIN
4	8A-YS8-008-010		COVER,TERMINAL
5	8A-YS8-602-010		SPKR,W 200
6	88-NS5-610-010		CORD,SPKR

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF0-906-010		IB,EZ(9L)FM-BL24<24EZ>
1	8A-NF0-916-010		IB,EZ(9L)FM-BL26(RDS)<26EZ>
1	8A-NF0-926-010		IB,EZ(9L)FM-BL28(3D)<28EZ>
1	8A-NF0-905-010		IB,K(E)FM-BL24<24K>
1	8A-NF0-915-010		IB,K(E)FM-BL28(3D)<28K>
2	87-043-106-010		WIRE,FM ANT(Z)
3	87-A90-030-010		ANT,LOOP AM-NC C
4	8Z-NF9-702-010		RC UNIT,ZAS02

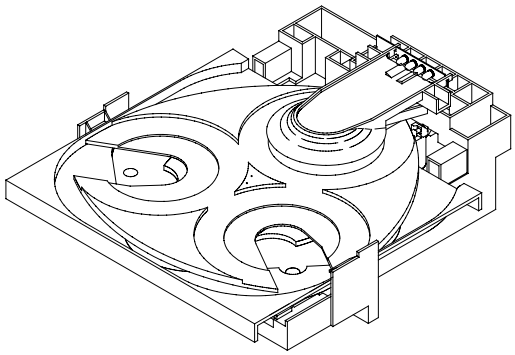
アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)
AIWA CO.,LTD. 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111

9420025 0251431 Printed in Singapore

aiwa SERVICE

AZG-1

English



SERVICE MANUAL

CD-R/RW MECHANISM

BASIC CD MECHANISM:KSM-880CAB

TYPE
ZD8RD
YZD8RMDJM
ZD8RMDJM
ZD8RDNDM
YKZD8RDF
ZD8RDM
YZD8RDM
ZD8RN1DM
YZD8RDJM

aiwa

S/M Code No. 09-001-335-3N6

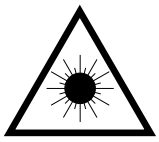
DATA

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynling laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

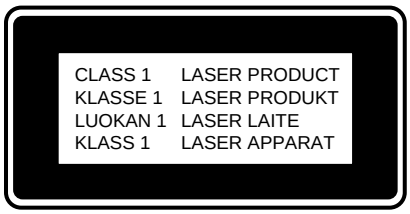
ATTENTION

L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!

Usynlig laserståling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

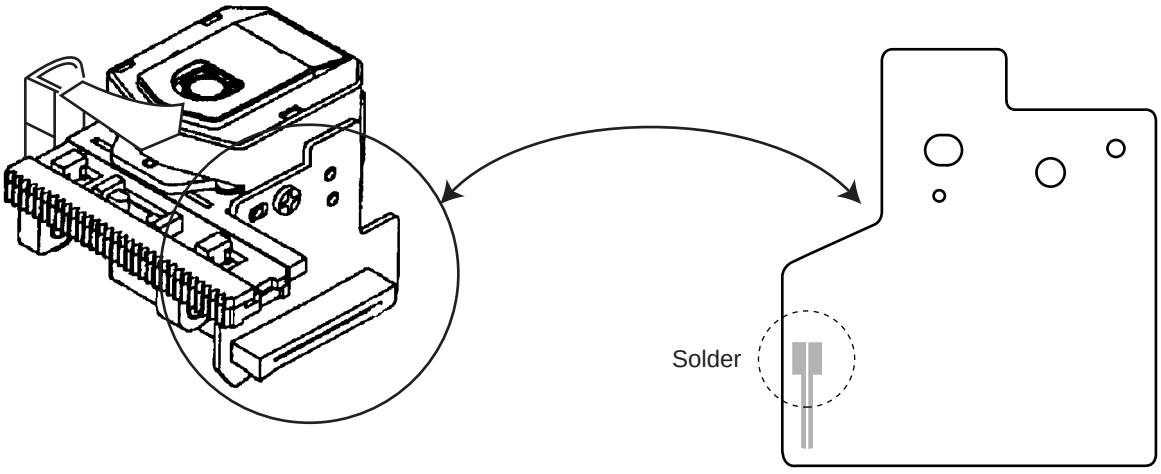
This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

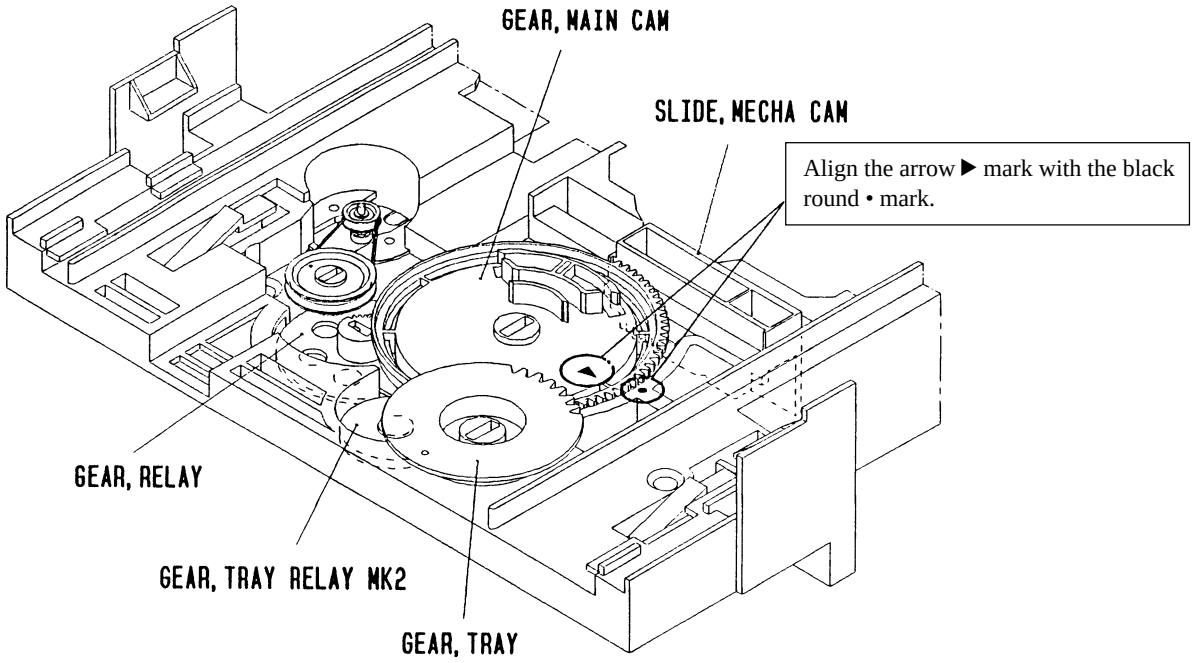
1) After the connection, remove solder shown in the figure below.



How to Adjust the Rotating Phase of the Gear, Main Cam

1) Push down the hooking catch of the CHAS. MECH, and remove the TRAY.
2) Align the arrow mark of the Gear, Main Cam with the black round mark of the CHAS, MECHA as shown below.
3) Confirm that the Slide, Mech Cam is located in the right position, then insert the TRAY gently.

Caution: If the rotating phase of the Gear, Main Cam is incorrectly adjusted, the chucking operation and tray movement will have malfunction.



ELECTRICAL MAIN PARTS LIST

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

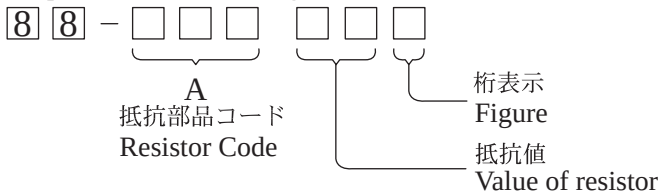
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	87-A21-381-040		C-IC,LA9235M
	87-A21-556-010		C-IC,LC78641E
	87-A21-414-010		IC,BA5927S
TRANSISTOR			
	87-026-609-080		TR,KTA1266GR
	87-A30-076-080		C-TR,2SC3052F
	87-A30-497-080		TR,2SA1980Y/G
	87-A30-087-080		C-FET,2SK2158
	87-026-237-080		CHIP-TR,DTC124XK <EXCEPT ZD8RN1DM,YZD8RDM>
	87-A30-075-080		C-TR,2SA1235F
DIODE			
	87-A40-270-080		C-DIODE,MC2838
	87-070-136-080		ZENER,MTZJ5.1B
	87-A40-003-080		ZENER,MTZJ4.3A
	87-A40-337-080		ZENER,MTZJ6.8B
	87-A40-313-080		C-DIODE,MC2840
3CD C.B			
C1	87-010-374-080		CAP,E 47-10
C2	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C2	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C3	87-010-260-080		CAP, ELECT 47-25V
C4	87-010-260-080		CAP, ELECT 47-25V
C5	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C5	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C6	87-010-405-080		CAP, ELECT 10-50V
C7	87-010-263-080		CAP, ELECT 100-10V
C8	87-012-349-080		C-CAP,S 1000P-50 CH
C10	87-010-546-080		CAP,E 0.33-50
C11	87-010-401-080		CAP, ELECT 1-50V
C13	87-010-321-020		C-CAP,S 82P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C13	87-010-321-080		C-CAP,S 82P-50 J CH <YKZD88RDF,ZD8RD>
C15	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C15	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C16	87-010-260-080		CAP, ELECT 47-25V
C101	87-010-992-080		C-CAP,S 0.047-25 B
C102	87-010-401-080		CAP, ELECT 1-50V
C103	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C103	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C104	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C104	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C105	87-010-260-080		CAP, ELECT 47-25V
C106	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C106	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C107	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C107	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C108	87-010-186-080		CAP,CHIP 4700P<YKZD88RDF,ZD8RD>
C108	87-010-186-020		CAP,CHIP 4700P <EXCEPT YKZD88RDF,ZD8RD>
C109	87-010-992-080		C-CAP,S 0.047-25 B
C110	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C110	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C111	87-010-260-080		CAP, ELECT 47-25V
C112	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C112	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C114	87-010-260-080		CAP, ELECT 47-25V
C115	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C115	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C116	87-010-260-080		CAP, ELECT 47-25V
C117	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C117	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C118	87-010-260-080		CAP, ELECT 47-25V
C119	87-015-819-080		
C120	87-010-312-080		C-CAP,S 15P-50 CH <YKZD88RDF,ZD8RD>
C120	87-010-312-020		C-CAP,S 15P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C121	87-010-312-020		C-CAP,S 15P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C121	87-010-312-080		C-CAP,S 15P-50 CH <YKZD88RDF,ZD8RD>
C122	87-010-404-080		CAP, ELECT 4.7-50V
C123	87-010-197-020		CHIP CAPACITOR,0.01-25 <EXCEPT YKZD88RDF,ZD8RD>
C123	87-010-197-080		CHIP CAPACITOR,0.01-25 <YKZD88RDF,ZD8RD>
C124	87-010-401-080		CAP, ELECT 1-50V
C126	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C126	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C128	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C128	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C130	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C130	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C132	87-010-405-080		CAP, ELECT 10-50V
C133	87-010-314-020		C-CAP,S 22P-50V <EXCEPT YKZD88RDF,ZD8RD>
C133	87-010-314-080		C-CAP,S 22P-50V<YKZD88RDF,ZD8RD>
C135	87-A11-088-080		CAP,TC U 100P-50 J CH
C151	87-010-405-080		CAP, ELECT 10-50V
C152	87-010-405-080		CAP, ELECT 10-50V
C192	87-012-349-080		C-CAP,S 1000P-50 CH
C193	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C193	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C201	87-A10-730-080		CAP,E 1000-16 SMG
C202	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C202	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C204	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C204	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C205	87-010-405-080		CAP, ELECT 10-50V
C206	87-010-405-080		CAP, ELECT 10-50V
C207	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C207	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C301	87-010-382-080		CAP, ELECT 22-25V
C302	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C302	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C303	87-010-260-080		CAP, ELECT 47-25V
C401	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C401	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C402	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C402	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C403	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C403	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C404	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C404	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C405	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C405	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C406	87-010-322-020		C-CAP,S 100P-50 CH <EXCEPT YKZD88RDF,ZD8RD>
C406	87-010-322-080		C-CAP,S 100P-50 CH <YKZD88RDF,ZD8RD>
C407	87-010-405-080		CAP, ELECT 10-50V
C454	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
C454	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C601	87-010-260-080		CAP, ELECT 47-25V
C602	87-010-196-080		CHIP CAPACITOR,0.1-25 <YKZD88RDF,ZD8RD>
C602	87-010-196-020		CHIP CAPACITOR,0.1-25 <EXCEPT YKZD88RDF,ZD8RD>
CN1	87-A60-429-010		CONN,16P H TOC-A
CN201	84-ZG1-648-010		CONN ASSY,6P
CN202	87-A60-130-010		CONN,5P V
CN501	84-ZG1-647-010		CONN ASSY,2P <EXCEPT ZD8RN1DM,ZD8RNDM>
CN601	87-009-345-010		CONN,2P PH V <EXCEPT ZD8RN1DM,ZD8RDM,YZD8RDM,ZD8RNDM>
CON401	87-099-030-010		CONN,13P 6216H
FB601	87-008-372-080		FLTR,EMI BL01 RN1 <EXCEPT ZD8RN1DM,ZD8RDM,YZD8RDM,ZD8RNDM>
FB602	87-008-372-080		FLTR,EMI BL01 RN1
LED601	87-A40-558-010		LED,SLZ-8128A-01-A
M201	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
SW201	87-036-109-010		SW,MICRO SPPB61
SW202	87-036-109-010		SW,MICRO SPPB61
X101	87-A70-046-010		VIB,XTAL 16.934MHZ
LED. C.B			
LED501	87-A40-263-080		LED,SLH-56PCT31 GRN <EXCEPT ZD8RN1DM,ZD8RNDM>
LED502	87-A40-263-080		LED,SLH-56PCT31 GRN <EXCEPT ZD8RN1DM,ZD8RNDM>
LED503	87-A40-268-080		LED,SLH-56DCT31 ORN <EXCEPT ZD8RN1DM,ZD8RNDM>
LED504	87-A40-268-080		LED,SLH-56DCT31 ORN <EXCEPT ZD8RN1DM,ZD8RNDM>
T-T C.B			
C401	87-018-214-080		CAP TC U 0.1-50F
CON401	86-NFZ-675-010		CONN,5P H 6216-11H
M401	87-045-364-010		MOTOR(BCH3B14)
PS401	87-026-573-010		SNSR,PHOTO GP1S53V
MOTOR C.B			
PIN3	91-564-722-110		CONN,PIN 6P
SW1	91-572-085-110		LEAF SWITCH

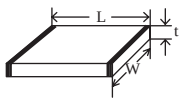
- Regarding connectors, they are not stocked as they are not the initial order items.
  The connectors are available after they are supplied from connector manufacturers upon the order is received.

○チップ抵抗部品コード／CHIP RESISTOR PART CODE

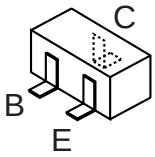
チップ抵抗部品コードの成り立ち
Chip Resistor Part Coding



チップ抵抗
Chip resistor

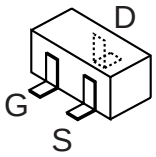
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法／Dimensions (mm) 外形／Form	L	W	t	抵抗コード : A Resistor Code : A
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION

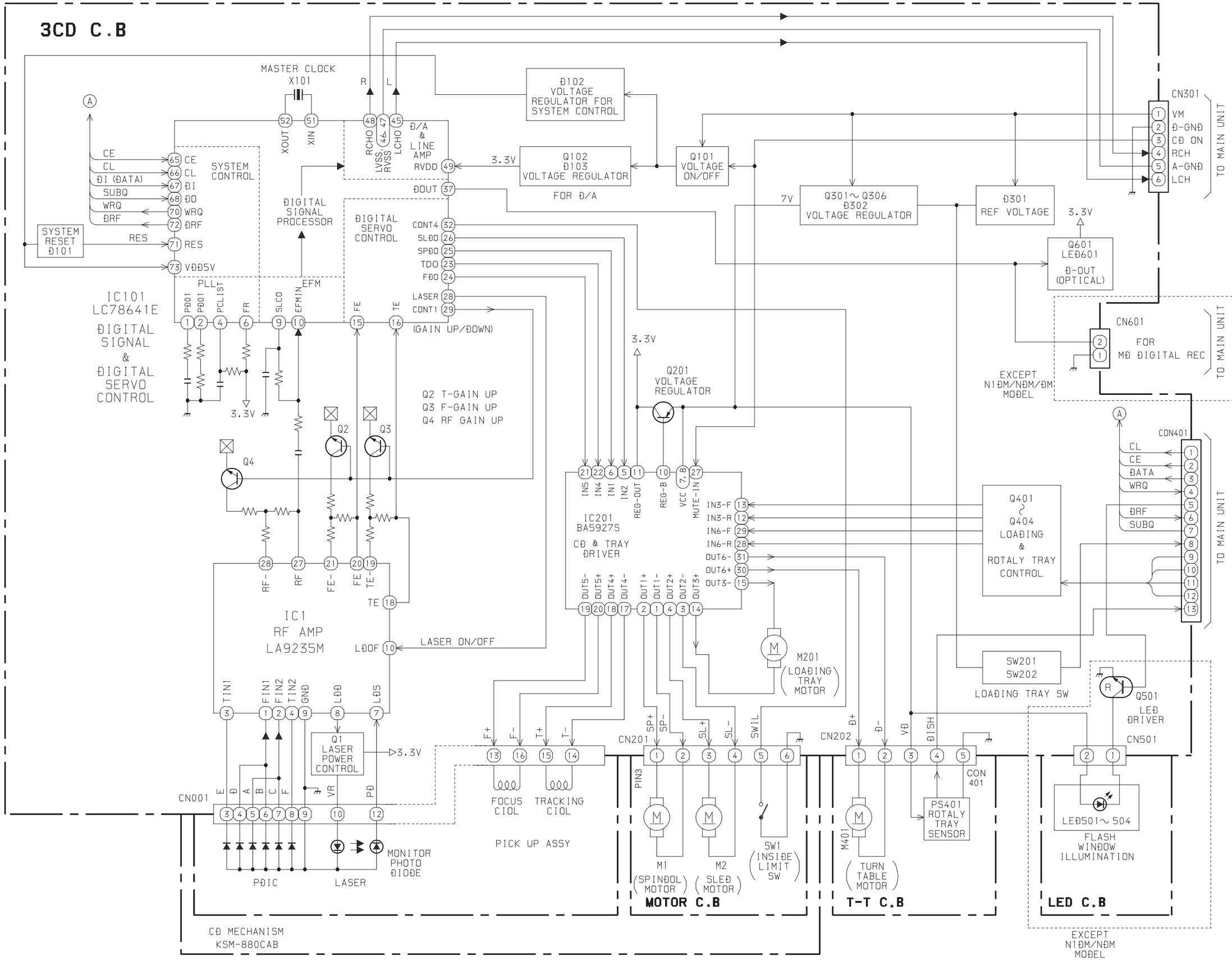


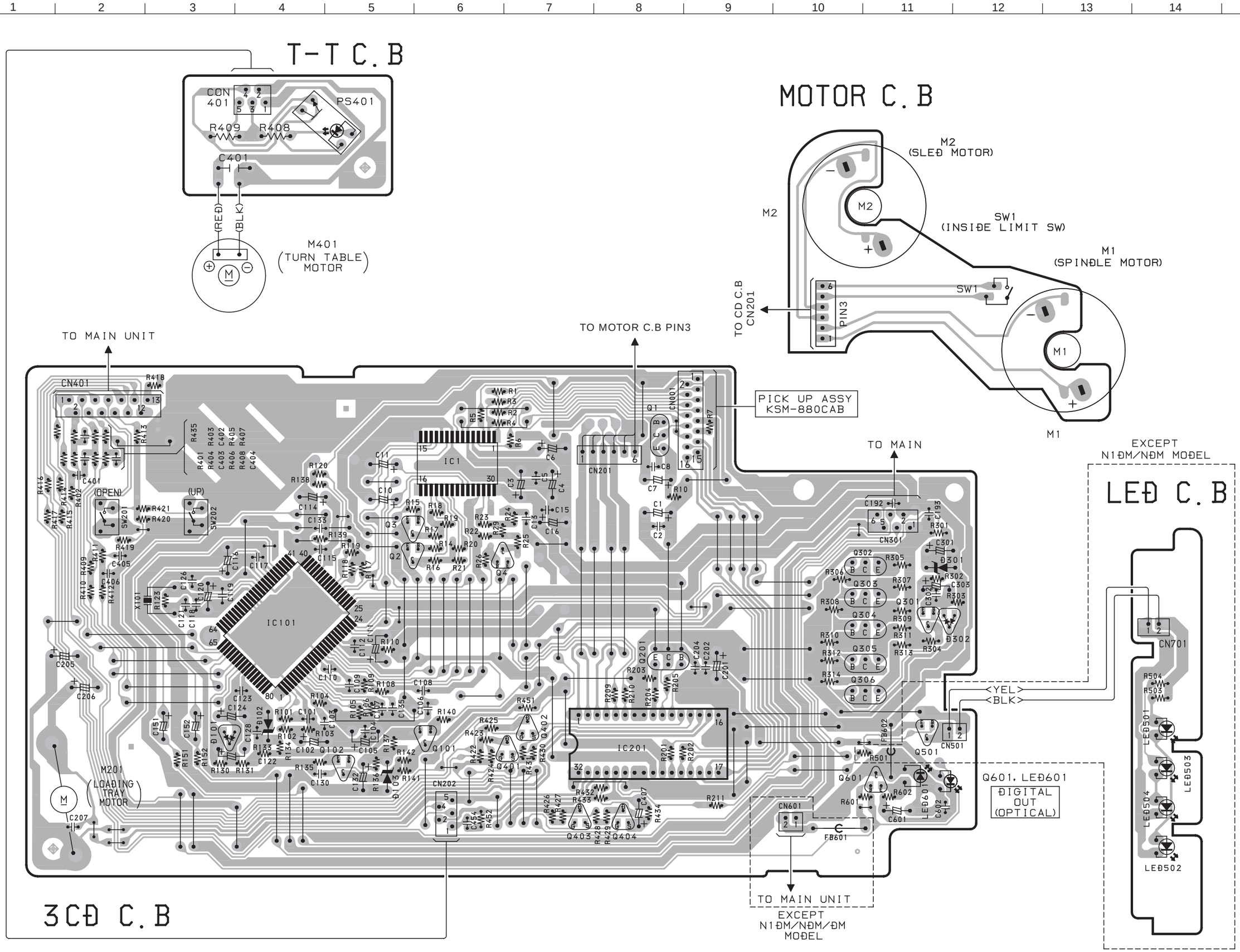
2SA1235F
2SC3052F
DTC124XK

2SA1980Y/G
KTA1266GR

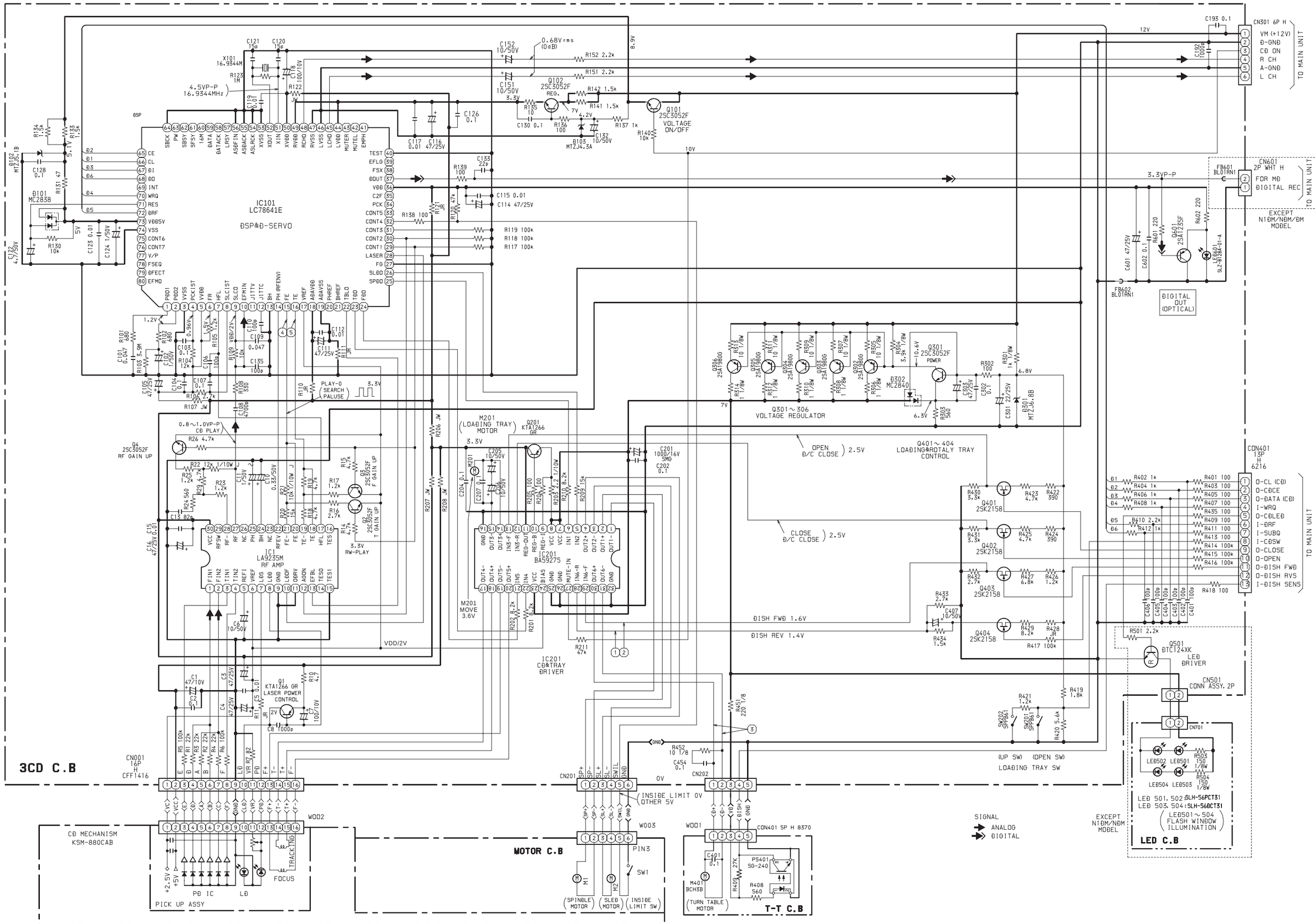


2SK2158


3CD C.B
MASTER CLOCK
X101
XOUT
XIN
R
L
RCHO
LVSS
RVSS
LCHO
Đ/A & LINE AMP
Đ102 VOLTAGE REGULATOR FOR SYSTEM CONTROL
Q102 Đ103 VOLTAGE REGULATOR
FOR Đ/A
Q101 VOLTAGE ON/OFF
3.3V
RVDD
ĐOUT
CE
CL
Đ I (ĐATA)
SUBQ
WRQ
ĐRF
RES
VĐĐ5V
SYSTEM CONTROL
SYSTEM RESET Đ101
ĐIGITAL SIGNAL PROCESSOR
ĐIGITAL SERVO CONTROL
CONT4
SLĐO
SPĐO
TDO
FĐO
LASER
CONT1
(GAIN UP/ĐOWN)
PLL
EFM
IC101
LC78641E
ĐIGITAL SIGNAL & ĐIGITAL SERVO CONTROL
PĐO1
PDO1
PCLIST
FR
SLCO
EFMIN
FE
TE
Q2 T-GAIN UP
Q3 F-GAIN UP
Q4 RF GAIN UP
Q2
Q3
Q4
Q201 VOLTAGE REGULATOR
7V
Q301~Q306 Đ302 VOLTAGE REGULATOR
Đ301 REF VOLTAGE
Q601 LEĐ601 Đ-OUT (OPTICAL)
CN301
VM
Đ-GNĐ
CĐ ON
RCH
A-GNĐ
LCH
TO MAIN UNIT
CN601
FOR MĐ ĐIGITAL REC
EXCEPT N1ĐM/NĐM/ĐM MOĐEL
CON401
CL
CE
ĐATA
WRQ
ĐRF
SUBQ
IC201
BA5927S
CĐ & TRAY ĐRIVER
IN5
IN4
IN1
IN2
REG-O
REG-B
VCC
MUTE-IN
IN3-F
IN3-R
IN6-F
IN6-R
OUT6-
OUT6+
OUT3-
OUT5-
OUT5+
OUT4+
OUT4-
OUT1+
OUT1-
OUT2+
OUT2-
OUT3+
Q401 ~ Q404 LOAĐING & ROTALY TRAY CONTROL
SW201 SW202
LOAĐING TRAY SW
M201 (LOAĐING TRAY MOTOR)
M
IC1
RF AMP
LA9235M
RF-
RF
FE-
FE
TE-
TE
LĐOF
LASER ON/OFF
TIN1
FIN1
FIN2
TIN2
GND
LĐĐ
LĐS
Q1 LASER POWER CONTROL
VR
PĐ
CN001
E
Đ
A
B
C
F
PĐIC
LASER
MONITOR PHOTO ĐIOĐE
F+
F-
T+
T-
FOCUS CIOL
TRACKING CIOL
PICK UP ASSY
CN201
SP+
SP-
SL+
SL-
SWIL
PIN3
M1 (SPINĐOL MOTOR)
M2 (SLEĐ MOTOR)
SW1 (INSIĐE LIMIT SW)
MOTOR C.B
CN202
Đ+
Đ-
VĐ
ĐISH
M401
TURN TABLE MOTOR
PS401 ROTALY TRAY SENSOR
CON 401
T-T C.B
Q501 LEĐ ĐRIVER
CN501
LEĐ501~504
FLASH WINĐOW ILLUMINATION
LED C.B
EXCEPT N1ĐM/NĐM MOĐEL
CĐ MECHANISM KSM-880CAB


T-T C.B
CON 401
PS401
R409
R408
C401
(RED)
(BLK)
M401
(TURN TABLE MOTOR)
MOTOR C.B
M2
(SLED MOTOR)
M2
SW1
(INSIDE LIMIT SW)
M1
(SPINDLE MOTOR)
SW1
PIN3
TO CD C.B
CN201
M1
TO MAIN UNIT
TO MOTOR C.B PIN3
PICK UP ASSY
KSM-880CAB
TO MAIN
EXCEPT
N1DM/NDM MODEL
LED C.B
CN401
R418
(OPEN)
(UP)
SW201
SW202
M201
(LOADING TRAY MOTOR)
IC1
IC101
IC201
CN201
CN001
CN202
CN601
CN301
CN501
CN701
Q1
Q2
Q3
Q4
Q101
Q102
Q201
Q301
Q302
Q303
Q304
Q305
Q306
Q401
Q402
Q403
Q404
Q501
Q601
FB601
FB602
X101
D101
D102
D301
D302
LED501
LED502
LED503
LED504
LED601
<YEL>
<BLK>
Q601, LED601
DIGITAL OUT (OPTICAL)
TO MAIN UNIT
EXCEPT
N1DM/NDM/DM
MODEL
3CD C.B

SCHEMATIC DIAGRAM



TEST MODE

1. How to Start the CD Test Mode

While pressing the CD function key, connect the AC power plug to wall outlet.
The test mode starts up and “CD TEST” appears on the display.

2. How to Exit the CD Test Mode

Press the POWER button or disconnect the AC power plug from wall outlet.
* When any function key other than PLAY is pressed during playback, the test mode is canceled.

3. Function and Use of the CD Test Mode

NO	MODE	How to enter the mode	Display	Operation	Check item
1	Start mode		All indicators turn on	• All FL all ndicators turn on	• FL check • Microprocessor check
2	Search mode	STOP button	CD	• LD turns on all the time • Focus search continuos operation *1 • Spindle motor continuos kick	• APC circuit check • Laser current measurement • Focus search waveform check • Focus error waveform check (Ignores DRF during search mode)
3	Play mode	PLAY button	Normal	• Normal playback • Focus search is continued if failed in TOC READ.	• Each servo circuit is checked • DRF check
4	Traverse mode	PAUSE button	Normal	• Tracking servo OFF/ON Repeats OFF/ON every time the PAUSE button is pressed	• Tracking balance check
5	Sled mode	FF button	CD TEST	• Moves PU to inner circumference *2 Kicks the lens to inner circumference at the same time	• Sled circuit check • Tracking circuit check • Mechanism operation check • PU check
		RWD button	CD TEST	• Moves PU to outer circumference *2 Kicks the lens to outer circumference at the same time	
6	Spindle mode	TAPE REC button	All indicators turn on	• Pressing the button once rotates the spindle motor in the normal direction (rough speed). Pressing the button again rotates it in the reverse direction. Pressing it again stops the motor	• Spindle circuit check • Spindle motor check
7	RF AGC mode	TUNER button	AGC ON/OFF	• Repeats ON/OFF every time the TUNER button is pressed	• PU good or defective check • RF AMP circuit check

*1 ..... When the focus search keeps running for 10 minutes or longer continuously, the driver IC heats up, and the protective circuit works so that the machine may stops operating.
In this case, turn off the main power, wait for a while and restart the machine.

*2 ..... Do not keep pressing the FF or RWD button while the pickup is located at the innermost or outermost circumference because the gear can be damaged as the sled motor keeps rotating.

4. Automatic Adjustment Result Display

The automatic adjustment values of the focus and the tracking can be displayed.

4-1. Automatic Adjustment Result Display of Focus Offset Cancel/Gain

1) Enter the start mode (all indicators turn on).
2) Press the TAPE button to display “F**” and set each of the adjustment item to either ON or OFF. (Refer to the following table.)
3) Press the PLAY button to play back the CD.
4) Press the CD button.
5) The automatic adjustment value “F** **” is displayed. (Refer to the following table.)
6) Upon completion of check, press the CD button twice to return to the play mode.

Adjustment item (ON = 1, OFF = 0)			Automatic adjustment value display (Asterisk * means hexadecimal display.)			
F	OFFSET	GAIN	F	OFFSET	—	GAIN
F	0	0	F	Not displayed	Not displayed	Not displayed
F	1	1	F	**	Not displayed	**
F	1	0	F	**	Not displayed	Not displayed
F	0	1	F	Not displayed	Not displayed	**

4-2. Automatic Adjustment Result Display of Tracking Offset Cancel/Balance/Gain

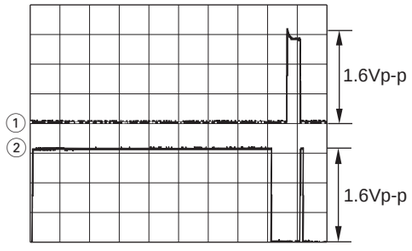
1) Enter the start mode (all indicators turn on).
2) Press the AUX button to display “T***” and set each adjustment item to either ON or OFF. (Refer to the following table.)
3) Press the PLAY button to play back the CD.
4) Press the CD button twice.
5) The automatic adjustment value “F******” is displayed. (Refer to the following table.)
6) Upon completion of check, press the CD button to return to the play mode.

Adjustment item (ON = 1, OFF = 0)				Automatic adjustment value display (Asterisk * means hexadecimal display.)			
T	OFFSET	BALANCE	GAIN	T	OFFSET	BALANCE	GAIN
T	0	0	0	T	Not displayed	Not displayed	Not displayed
T	1	1	1	T	**	**	**
T	1	1	0	T	**	**	Not displayed
T	1	0	1	T	**	Not displayed	**
T	1	0	0	T	**	Not displayed	Not displayed
T	0	1	1	T	Not displayed	**	**
T	0	1	0	T	Not displayed	**	Not displayed
T	0	0	1	T	Not displayed	Not displayed	**

WAVE FORM

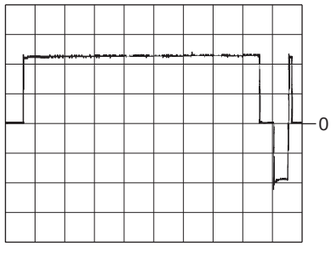
① IC201 ㉘ (IN6-R)
② IC201 ㉙ (IN6-F)

VOLT/DIV: 500mV
TIME/DIV: 200mS



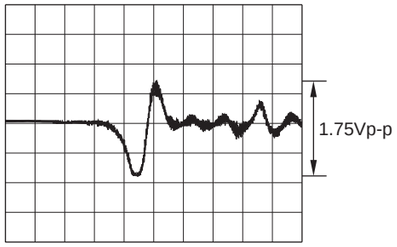
③ Between CN202 ① and ②
(② Pin: 0 Level)

VOLT/DIV: 1V
TIME/DIV: 200mS



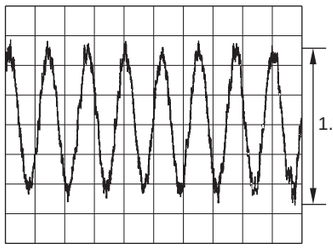
④ IC101 ⑮ (FE)

VOLT/DIV: 500mV
TIME/DIV: 2mS



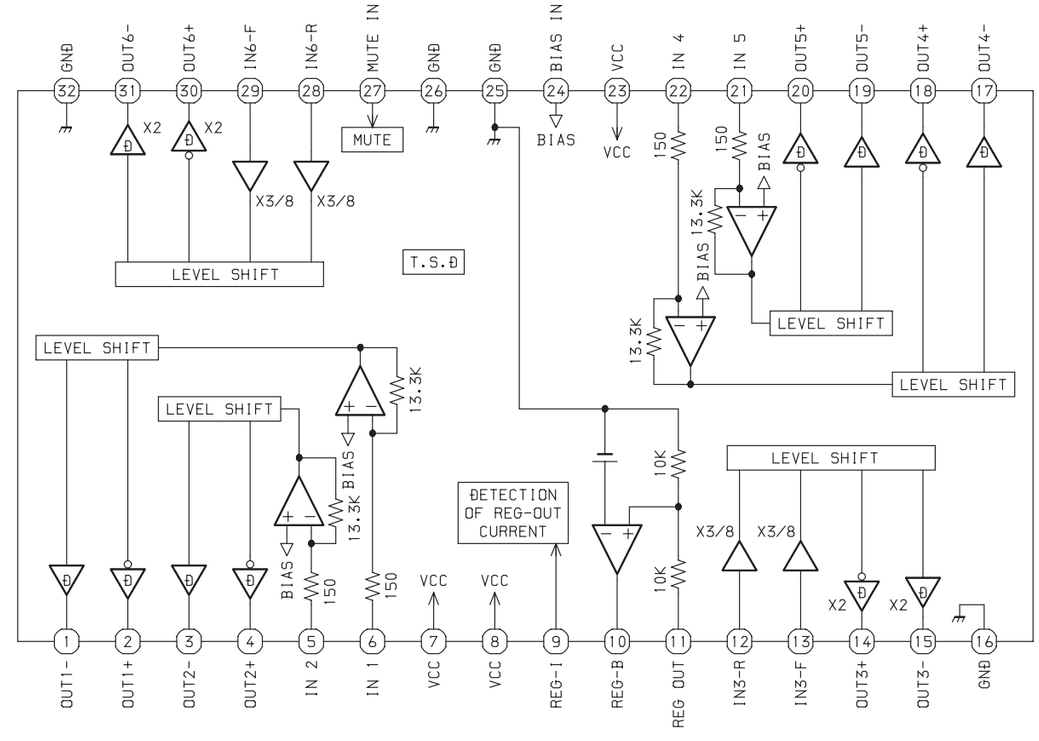
⑤ IC101 ⑯ (TE)

VOLT/DIV: 200mV
TIME/DIV: 200µS

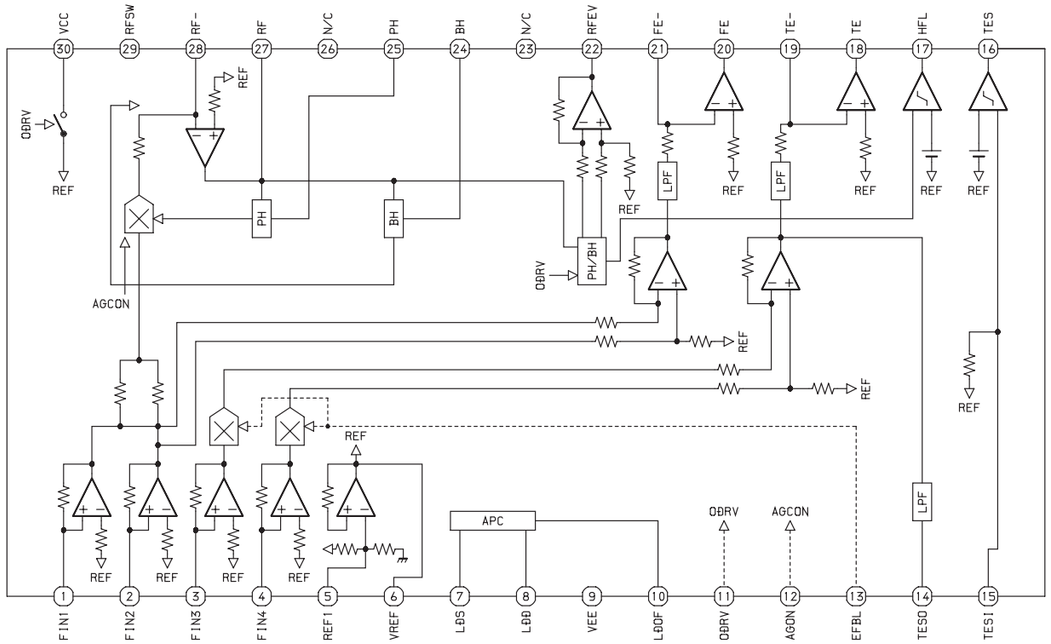


IC BLOCK DIAGRAM

IC, BA5927S



IC, LA9235M



IC DESCRIPTION

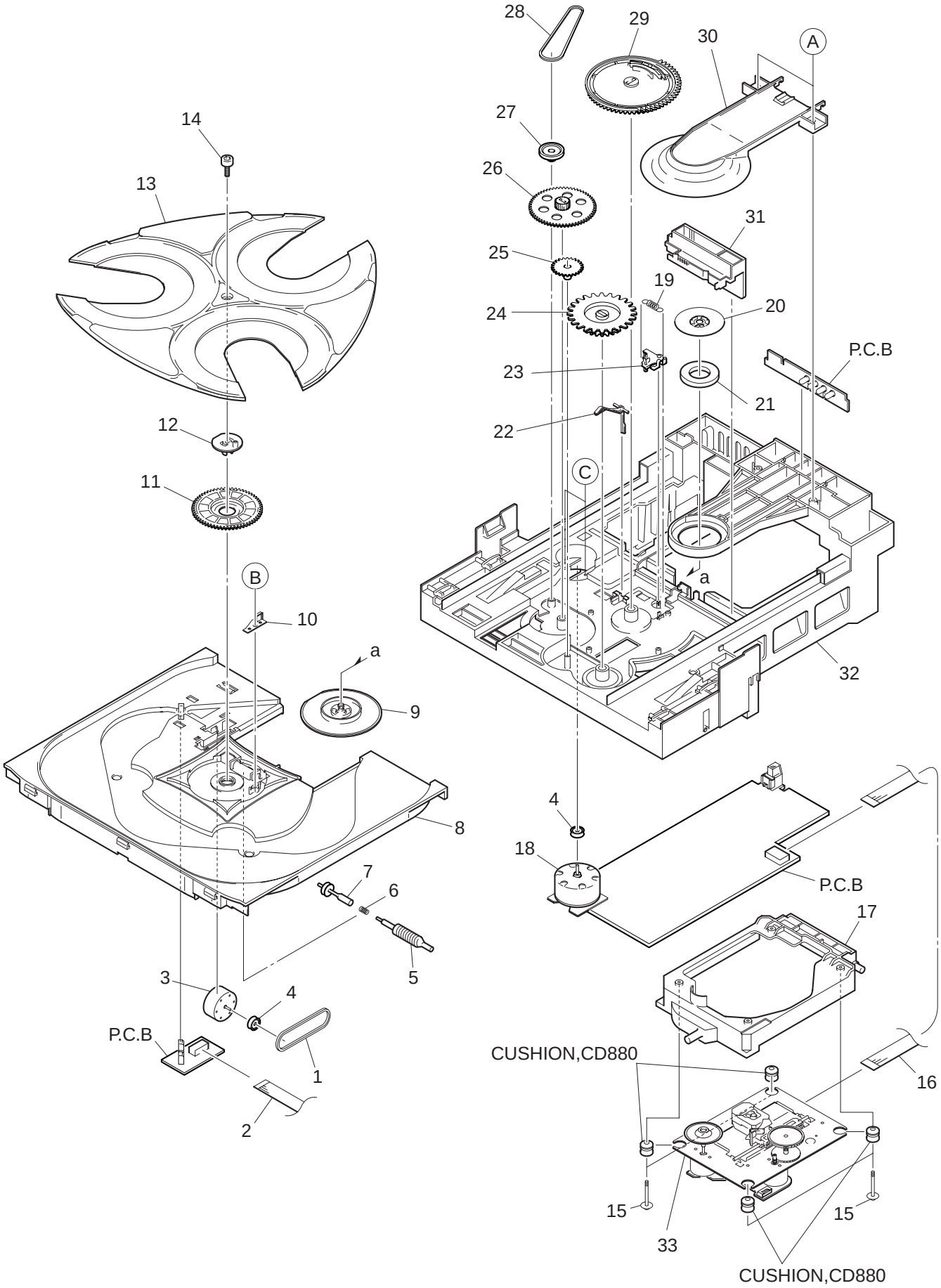
IC, LC78641E

Pin No.	Pin Name	I/O	Description
1	PDO1	O	Internal VCO control phase comparator output pin. (Pull down)
2	PDO2	O	Internal VCO control phase comparator output pin. OFF for rough servo, ON for phase servo. (Pull down)
3	VVSS	—	Internal VCO ground pin.
4	PCKIST	—	PDO output current adjustment resistor connection pin.
5	VVDD	—	Internal VCO power supply pin.
6	FR	—	VCO frequency range adjustment resistor connection pin. (Pull up)
7	HFL	I	Mirror detection signal input pin.
8	SLCIST	—	SLCO output current adjustment resistor connection pin.
9	SLCO	O	Control output.
10	EFMIN	I	EFM signal input pin.
11	JITTV	O	Jitter detection monitor pin.
12	JITTC	O	Jitter detection adjustment pin. (Pull down)
13	BH	I	BH signal input pin. (Connected to GND)
14	PH (RFENV)	I	PH signal or RFENV signal input pin.
15	FE	I	FE signal input pin.
16	TE	I	TE signal input pin.
17	VREF	I	VREF input pin.
18	ADAVDD	—	Servo A/D, D/A power supply pin.
19	ADAVSS	—	Servo A/D, D/A ground pin.
20	PHREF	O	PH reference output pin. (Not connected)
21	BHREF	O	BH reference output pin. (Not connected)
22	TBLO	O	Tracking balance output pin.
23	TDO	O	Tracking control output pin.
24	FDO	O	Focus control output pin.
25	SPDO	O	Spindle control output pin.
26	SLDO	O	Thread control output pin.
27	DVREF/FG	I/O	Output driver VREF output pin. FG signal input pin. (Connected to GND)
28	LASER	O	Laser ON/OFF control pin.
29	CONT1	I/O	General-purpose input/output pin 1. (Connected to GND)
30	CONT2	I/O	General-purpose input/output pin 2. (Connected to GND)
31	CONT3	I/O	General-purpose input/output pin 3. (Connected to GND)
32	CONT4	I/O	General-purpose input/output pin 4.
33	CONT5	I/O	General-purpose input/output pin 5. (Not connected)
34	PCK	O	EFM data playback clock monitor pin. Average 4.3218MHz when the phase is locked. (Not connected)
35	C2F	O	C2 flag output pin. (Not connected)
36	VDD	—	Digital power supply pin.
37	DOUT	O	Digital out output pin. (EIAJ format)
38	FSX	O	Output pin for the 7.35kHz synchronization signal divided from the crystal oscillator. (Not connected)

Pin No.	Pin Name	I/O	Description
39	EFLG	O	C1, C2 error correction monitor pin. (Not connected)
40	TEST	I	Test input pin. (Connected to GND)
41	EMPH	I/O	Emphasis pin. Which becomes an input pin after reset and can be controlled externally. This becomes an emphasis monitor pin under control by command. (Not connected)
42	MUTEL	O	L channel mute output pin. (Not connected)
43	MUTER	O	R channel mute output pin. (Not connected)
44	LVDD	—	L channel power supply pin.
45	LCHO	O	L channel output pin.
46	LVSS	—	L channel ground pin.
47	RVSS	—	R channel ground pin.
48	RCHO	O	R channel output pin.
49	RVDD	—	R channel power supply pin.
50	XVDD	—	Crystal oscillator power supply pin.
51	XIN	I	Connections for a 16.9344MHz crystal oscillator pin.
52	XOUT	O	
53	XVSS	—	Crystal oscillator ground pin.
54	ASLRCK	I	L/R clock input pin. (Connected to GND)
55	ASDACK	I	Bit clock input pin. (Connected to GND)
56	ASDFIN	I	L/R channel data input pin. (Connected to GND)
57	LRSY	O	L/R clock output pin. (Not connected)
58	DATACK	O	Bit clock output pin. (Not connected)
59	DATA	O	L/R channel data output pin. (Not connected)
60	16M	O	16.9344MHz output pin. (Not connected)
61	SFSY	O	Subcode frame synchronization signal output pin. This signal falls when the subcode is in the standby state. (Not connected)
62	SBSY	O	Subcode clock synchronization signal output pin. (Not connected)
63	PW	O	Subcode P, Q, R, S, T, U and W output pin. (Not connected)
64	SBCK	I	Subcode readout clock input pin. (Connected to GND)
65	CE	I	Chip enable signal input pin.
66	CL	I	Data transfer clock input pin.
67	DI	I	Data input pin.
68	DO	O	Data output pin.
69	INT	O	Interruption signal output pin. (Not connected)
70	WRQ	O	Interruption signal output pin.
71	RES	I	Reset input pin. This pin must be set low briefly after power is first applied.
72	DRF	O	Focus ON detect pin.
73	VDD5V	—	Microprocessor interface power supply.
74	VSS	—	Digital ground pin.
75	CONT6	I/O	General-purpose input/output pin 6.
76	CONT7	I/O	General-purpose input/output pin 7.
77	V/P	O	Rough servo/phase control automatic switching monitor output pin. “H” for rough servo and “L” for phase servo. (Not connected)

Pin No.	Pin Name	I/O	Description
78	FSEQ	O	Synchronization signal detection output pin. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal agree. (Not connected)
79	DEFECT	I/O	Defect pin. Which becomes an input pin after reset and can be controlled externally. This becomes the defect monitor pin under control by command. (Not connected)
80	EFMO	O	EFM signal output pin. (Not connected)

MECHANICAL EXPLODED VIEW 1/1



MECHANICAL PARTS LIST 1/1

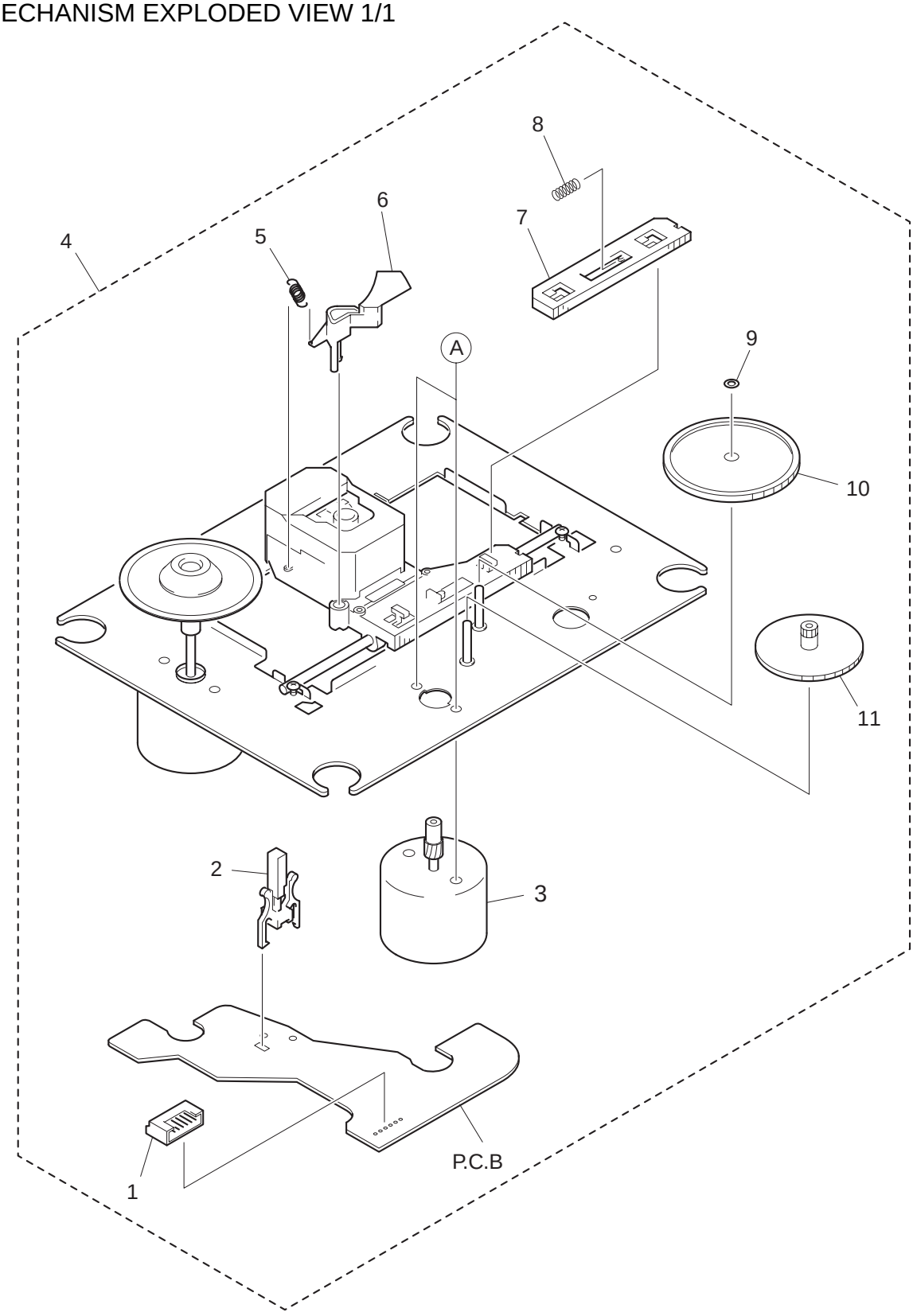
DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG1-225-010		BELT,SQ1.0-63.3
2	84-ZG1-673-010		F-CABLE,5P 1.25 210MM BLACK N <EXCEPT ZD8RN1DM,ZD8RNDM>
2	84-ZG1-672-010		F-CABLE,5P 1.25 210MM WHITE N <ZD8RN1DM,ZD8RNDM>
3	87-045-364-010		MOTOR(BCH3B14)
4	84-ZG1-267-010		PULLEY,LOAD MO 8 <EXCEPT YKZD8RDF,ZD8RD>
4	81-ZG1-212-010		PULLY,LOAD MO<YKZD8RDF,ZD8RD>
5	84-ZG1-238-010		GEAR,WORM N
6	84-ZG1-248-010		SPR-C,WORM
7	84-ZG1-239-210		PULLY,WORM N
8	84-ZG1-008-210		TRAY,NO3<ZD8RD>
8	8A-ZG1-001-010		TRAY,NO3 BLU<EXCEPT ZD8RD>
9	8A-ZG1-210-010		HLDR,MAGNET 23<YKZD8RDF>
9	84-ZG1-243-210		HLDR,MAGNET N(J) <YZD8RDJM,ZD8RMDJM,YZD8RMDJM>
9	84-ZG1-289-010		HLDR,MAGNET NAT<ZD8RNDM>
9	81-ZG1-277-310		HLDR,MAGNET N <ZD8RN1DM,ZD8RDM,YZD8RDM,ZD8RD>
10	84-ZG1-259-010		SPR-P,WORM
11	84-ZG1-221-010		GEAR,MAIN TT<YKZD8RDF>
11	84-ZG1-269-010		GEAR,MAIN TT 4<EXCEPT YKZD8RDF>
12	84-ZG1-224-010		LEVER,TT<EXCEPT ZD8RNDM>
12	84-ZG1-288-010		LEVER,TT NAT<ZD8RNDM>
13	8A-ZG1-002-010		TURN TABLE,NO1 BLU<EXCEPT ZD8RD>
13	84-ZG1-005-210		TURNTABLE,NO1(*)<ZD8RD>
14	81-ZG1-239-010		S-SCREW,TT
15	8A-ZG1-201-010		S-SCREW,MECH 880
16	85-NFT-611-110		FF-CABLE 16P-1.0
17	84-ZG1-299-210		HLDR,MECHA NO3<EXCEPT ZD8RNDM>
17	8A-ZG1-203-010		HLDR,MECHA NO3 NAT<ZD8RNDM>
18	87-045-305-010		MOTOR, RF-500TB DC-5V (2MA)
19	84-ZG1-211-010		SPR-E CAM S
20	84-ZG1-285-010		PLATE,MAGNET BLK<ZD8RN1DM>
20	81-ZG1-255-110		PLATE,MAGNET MK2<EXCEPT ZD8RN1DM>
21	83-ZG3-604-010		RING,MAG 2
22	83-ZG3-213-010		LVR,SW
23	84-ZG1-208-210		LEVER,CAM<YKZD8RDF>
23	84-ZG1-266-010		LEVER,CAN 8<EXCEPT YKZD8RDF>
24	84-ZG1-205-210		GEAR,TRAY (*)
25	81-ZG1-291-110		GEAR,TRAY RELAY NO3
26	84-ZG1-206-110		GEAR,RELAY<YKZD8RDF>
26	84-ZG1-274-010		GEAR,RELAY 8<EXCEPT YKZD8RDF>
27	84-ZG1-207-010		PULLEY,RELAY
28	84-ZG1-209-010		BELT,SQ1.8-117.7
29	84-ZG1-203-410		GEAR,MAIN CAM<ZD8RNDM>
29	84-ZG1-215-410		GEAR,MAIN CAM BLU<EXCEPT ZD8RNDM>
30	84-ZG1-011-010		REFLECTOR,CD <EXCEPT ZD8RN1DM,ZD8RNDM>
31	84-ZG1-216-310		SLIDE,MECHA CAM YEL <EXCEPT ZD8RNDM>
31	84-ZG1-204-310		SLIDER,MECHA CAM<ZD8RNDM>
32	84-ZG1-286-010		CHAS,MECHA NAT<ZD8RNDM>
32	84-ZG1-201-410		CHAS,MECHA<EXCEPT ZD8RNDM>
33	M8-ZZK-C90-070		KSM-880CAB
A	87-067-703-010		TAPPING SCREW, BVT2+3-10 <EXCEPT ZD8RN1DM,ZD8RNDM>
B	87-067-981-010		BVT2+3-6 BLK
C	87-251-070-410		U+2.6-3

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange		

CD MECHANISM EXPLODED VIEW 1/1



CD MECHANISM PARTS LIST 1/1

DESCRIPTIONで判断できない物は "REFERENCE NAME LIST" を参照してください。
If can't understand for Description please kindly refer to "REFERENCE NAME LIST".

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	91-564-722-110		CONN,PIN 6P
2	91-572-085-110		LEAF SWITCH
3	9X-264-655-010		SL MOTORR ASSY
4	M8-ZZK-C90-070		KSM-880CAB
5	92-647-416-020		SPRING EXTENSION
6	92-647-595-020		SHUTTER B
7	92-647-732-010		NS SLIDE RACK
8	92-647-742-010		SPRING COMPRESSION
9	93-321-813-110		POLI WASHER
10	92-647-407-010		GEAR A
11	92-647-408-020		GEAR B
A	93-713-786-510		SCREW,+P2-3

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

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